

# Graduate Bulletin

2008  
2009



**President  
Stephen L. Weber**

San Diego State University is the largest university in San Diego and the third largest in California. Our campus community is home to more than 36,000 students and approximately 5,849 faculty and staff.

At SDSU, faculty, staff, students, and community partners come together to pursue knowledge and meet the challenges of our region and our world. The educational process is not confined to classrooms and laboratories. It flows seamlessly wherever faculty and students come together—in traditional campus settings, in the community, and in the international arena. Faculty members exemplify the integrated role of teacher/scholar, enabling students to learn through both interaction and participation in ongoing research efforts and community-based learning projects. This pedagogical approach allows students to apply classroom learning to real-world challenges. San Diego State's reputation for academic excellence and practical problem-solving inspires the confidence of community leaders, who look to SDSU for ideas and solutions.

San Diego State is characterized by rapid change, increasing levels of student achievement, and exceptional faculty and staff. We are an intellectual community committed to the ideals of diversity and dedicated to human growth and development. All of these attributes make San Diego State a vital university serving the community with "minds that move the world."

Visit President Weber's Web site at:  
<http://advancement.sdsu.edu/presidentweber/>



**Historic Hepner Hall SDSU**  
photo: Alan Decker



# Academic Excellence

*At San Diego State University, we are dedicated to preparing our students for success in today's world and for tomorrow's.*



SDSU is the first U.S. university to offer a transnational triple degree among the United States, Canada, and Mexico.

**San Diego State University** strives for excellence in all we do: as scholars, as community members, and as participants in the quest for human advancement.

## Campus Community

SDSU is a community of people committed to student success. As the oldest and largest higher education institution in the San Diego region, SDSU has deep roots and connections. You'll have access to valuable internships, volunteer opportunities, and practical wisdom from experts in your field of study to enhance your classroom instruction.

## What is Your SDSU?

San Diego State University is an academically rich, urban university that provides endless possibilities for students. SDSU offers bachelor's degrees in 85 areas, master's degrees in 75, one educational specialist degree (Ed.S.), research doctorates (Ph.D./Ed.D.) in 14 areas, and one professional doctorate (Au.D.). SDSU is a place to challenge yourself...to take your education into your own hands and carve out your future.

With more than 36,000 students, award-winning professors, top-notch research facilities, and a location that serves as the gateway to Latin America and the Pacific Rim, SDSU gives you the tools to expand your knowledge and your potential. This is your journey... discover how to make SDSU your own.

## Make a Difference

SDSU alumni from all fields of study not only make a difference in the San Diego region, but around the world. What difference will you make? Start imagining now.



# San Diego: An International Hub

**SAN DIEGO**, the second largest city in California, is a thriving cultural, scientific, and educational center.

Bordering the Pacific Rim and Mexico, San Diego offers a wide variety of social and cultural activities. Known for its near-perfect climate, miles of sandy beaches, the world-famous San Diego Zoo, and fun-filled waterfront activities, San Diego is also recognized globally as a growing academic and research mecca.

San Diego's geographic location and diverse regional population help make the area a dynamic international hub.

## International Education

SDSU encourages students to engage in international educational opportunities. Each year, the campus welcomes students from all parts of the globe who provide enriching cultural interaction opportunities. The university also sends many students abroad to learn first-hand about other cultures, languages, and people. For more information, contact the International Student Center at [www.sdsu.edu/isc](http://www.sdsu.edu/isc).

**International Students**—The International Student Center provides services and programs to meet the needs of international students. The American Language Institute provides English language instruction for international students and professionals.

**Study Abroad Programs**—Students in study abroad programs gain intercultural communication skills, international understanding, a broader view of the world, lifelong friendships, foreign language skills, and self-awareness. SDSU has been ranked second in the nation for study abroad for the past two years. Join more than 1,400 students who study abroad each year in 50 countries, including Australia, Spain, Japan, Mexico, and China.

**Academic Programs**—International academic programs include the Center for International Business Education and Research; International Security and Conflict Resolution; and the International Business major, which is the largest program of its kind in the nation.



*Recent projects that total more than \$1 billion in value are completed or under way.*





# What Makes San Diego State a Great University?



In 2006–2007,  
SDSU granted  
8,252 degrees.

At San Diego State University, our mission is to provide research-oriented, high quality education for undergraduate and graduate students. We are committed to creating educational opportunities that not only contribute to human intellectual development, but also equip our students to succeed in an increasingly technological and global society. Faculty and students contribute to our community and to the world through distinction in teaching, research, and service.

SDSU offers 176 different academic degree choices. Students benefit from excellent classroom instruction and hands-on research opportunities as they work alongside faculty mentors at field sites and in classrooms, studios and laboratories. Since 2000, SDSU researchers have secured more than \$1 billion in external funding, bringing both cutting edge equipment and the excitement of discovery into laboratories and classrooms.

## Campus Growth

The San Diego State campus, with its distinctive California mission style of architecture, has supported more than \$1 billion worth of new construction in the last decade. The BioScience Center; a new home for the College of Arts and Letters; a completely redesigned tennis complex, softball field and swimming pools; and a striking pedestrian bridge that connects the residence halls with campus are just a few of the recent projects. In 2005, a San Diego Trolley station opened at SDSU, providing another means of transportation to and from campus for thousands of students, staff, and faculty. These important projects support academic and athletic programs and enhance the learning and living environment of the campus community.

No one could have predicted this phenomenal growth in 1897 when San Diego Normal School opened its doors in downtown San Diego to seven faculty and 91 students. The current campus on Montezuma Mesa, founded in 1931, covers 283 acres and enrolls more than 36,000 students. The university also offers classes at the Imperial Valley Campus in Calexico and a satellite facility in Brawley, operates the renowned Mount Laguna Observatory, and manages four biological field stations totaling more than 9,000 acres.

Throughout the years and the changes, San Diego State University's commitment to academic excellence and community involvement has never wavered. Now, more than ever, a degree from SDSU remains highly sought after, highly regarded, and highly valued.



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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. Office of Employee Relations and Compliance 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

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# Academic Calendar

# 2008-2009

## SUMMER TERM 2008

May 26	Holiday – Memorial Day. Faculty/staff holiday. Campus closed.
May 27	First day of summer term.
May 28	First day of classes.
May 28-July 9	Session S1.
May 28-August 20	Session T1.
May 30	Last day to apply for August 2008 graduation with an advanced degree, Division of Graduate Affairs.
June 5	Session S1 schedule adjustment. (6:00 p.m. deadline.)
June 12	Session T1 schedule adjustment. (6:00 p.m. deadline.)
July 3	Final day for submitting theses to the Division of Graduate Affairs for thesis review to ensure graduation in August 2008.
July 4	Holiday – Independence Day. Faculty/staff holiday. Campus closed.
July 7-August 22	Theses may be submitted to the Division of Graduate Affairs on an at-risk basis. However, August 2008 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.
July 10-August 20	Session S2.
July 18	Session S2 schedule adjustment. (6:00 p.m. deadline.)
July 22	Census.
July 30	Last day for submission of Incomplete and RP grade removals (excluding thesis) for summer graduation with an advanced degree.
August 13	Last day for reporting results on comprehensive examinations to the Division of Graduate Affairs by department or college.
August 19	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 22	Last day for submitting theses to the Division of Graduate Affairs for the current term.
August 22	Grades due from instructors. (11:00 p.m. deadline.)
August 22	Last day of summer term.

## FALL SEMESTER 2008

August 1	Applications for admission or readmission to San Diego State University for the spring semester 2009 accepted from domestic and international (foreign) students.*
August 25	First day of fall semester.
August 27	New Graduate Student Orientation.
August 29	Last day to officially withdraw for fall semester 2008 and receive a full refund.
September 1	Holiday – Labor Day. Faculty/staff holiday. Campus closed.
September 2	First day of classes.
September 2-22	Schedule adjustment and late registration.
September 9	Convocation.

September 22	Last day for payment of fees for late registration. (4:00 p.m. deadline.)
September 22	Last day to add classes, drop classes, or change grading basis. (6:00 p.m. deadline.)
September 22	Last day to officially withdraw from the university for fall semester 2008.
September 22	Last day to file petition for concurrent master's degree credit for fall semester 2008.
September 22	Last day to apply for December 2008 graduation with an advanced degree, Division of Graduate Affairs.
September 29	Census.
October 1	Applications for admission or readmission to San Diego State University for the fall semester 2009 accepted from domestic and international (foreign) students.*
November 3	Final day for submitting theses to the Division of Graduate Studies for thesis review to ensure graduation in December 2008.
Nov. 4-Dec. 31	Theses may be submitted to the Division of Graduate Affairs on an at-risk basis. However, December 2008 graduation is contingent upon completion of final processing by noon, December 19. Students missing this deadline will be required to reapply for graduation for the term in which they expect to graduate.
November 6	Last day to officially withdraw from all classes for fall 2008 and receive a prorated refund (withdrawal after September 22 requires special approval and a penalty fee is assessed).
November 11	Holiday – Veteran's Day. Faculty/staff holiday. Campus closed.
November 27-29	Holiday – Thanksgiving recess. Faculty/staff holiday. Campus closed.
December 1	Last day for submission of incomplete and RP grade removals (excluding thesis) for December 2008 graduation with an advanced degree.
December 12	Last day of classes before final examinations.
December 12	Last day for reporting results on comprehensive examinations to the Division of Graduate Affairs by department or college.
December 13-20	Final examinations.
December 19	Final day for depositing approved theses at Aztec Shops Montezuma Publishing. (Noon deadline.)
December 24-29	Holiday – Winter recess. Faculty/staff holiday. Campus closed.
December 31	Grades due from instructors. (11:00 p.m. deadline.)
December 31	Last day to apply for a leave of absence for fall semester 2008.
December 31	Last day for submitting theses to the Division of Graduate Affairs for the current term.
December 31	Last day of fall semester.
January 1	Holiday – New Year's Day. Faculty/staff holiday. Campus closed.

\* Graduate applicants should consult the departmental listings in the Graduate Bulletin for closing dates and program deadlines.

**SPRING SEMESTER 2009**

January 15	First day of spring semester.
January 19	Holiday – Martin Luther King, Jr. Day. Faculty/staff holiday. Campus closed.
January 21	Last day to officially withdraw for spring semester 2009 and receive a full refund.
January 22	First day of classes.
Jan. 22-Feb. 11	Schedule adjustment and late registration.
February 11	Last day for payment of fees for late registration. (4:00 p.m. deadline.)
February 11	Last day to add classes, drop classes, or change grading basis. (6:00 p.m. deadline.)
February 11	Last day to officially withdraw from the university for spring semester 2009.
February 11	Last day to file petition for concurrent master's degree credit for spring semester 2009.
February 11	Last day to apply for May 2009 graduation with an advanced degree, Division of Graduate Affairs.
February 18	Census.
March 28	Last day of classes before spring recess.
March 30 - April 3	Spring recess.
March 31	Holiday – Cesar Chavez Day. Faculty/staff holiday. Campus closed.
April 4	Classes resume.
April 6	Last day to officially withdraw from all classes for spring 2009 and receive a prorated refund (withdrawal after February 11 requires special approval and a penalty fee is assessed).
April 6	Final day for submitting theses to the Division of Graduate Affairs for thesis review to ensure graduation in May 2009. Joint university deadlines apply when submitting approved doctoral dissertations to the Division of Graduate Affairs for May commencement.
April 7- May 6	Theses may be submitted to the Division of Graduate Affairs after this date on an at-risk basis. However, May 2009 graduation is contingent upon completion of final processing by noon, May 21. Students missing this deadline will be required to reapply for graduation for the term in which they expect to graduate.
May 1	Last day for submission of Incomplete and RP grade removals (excluding thesis) for May 2009 graduation with an advanced degree.
May 13	Last day of classes before final examinations.
May 14-21	Final examinations.

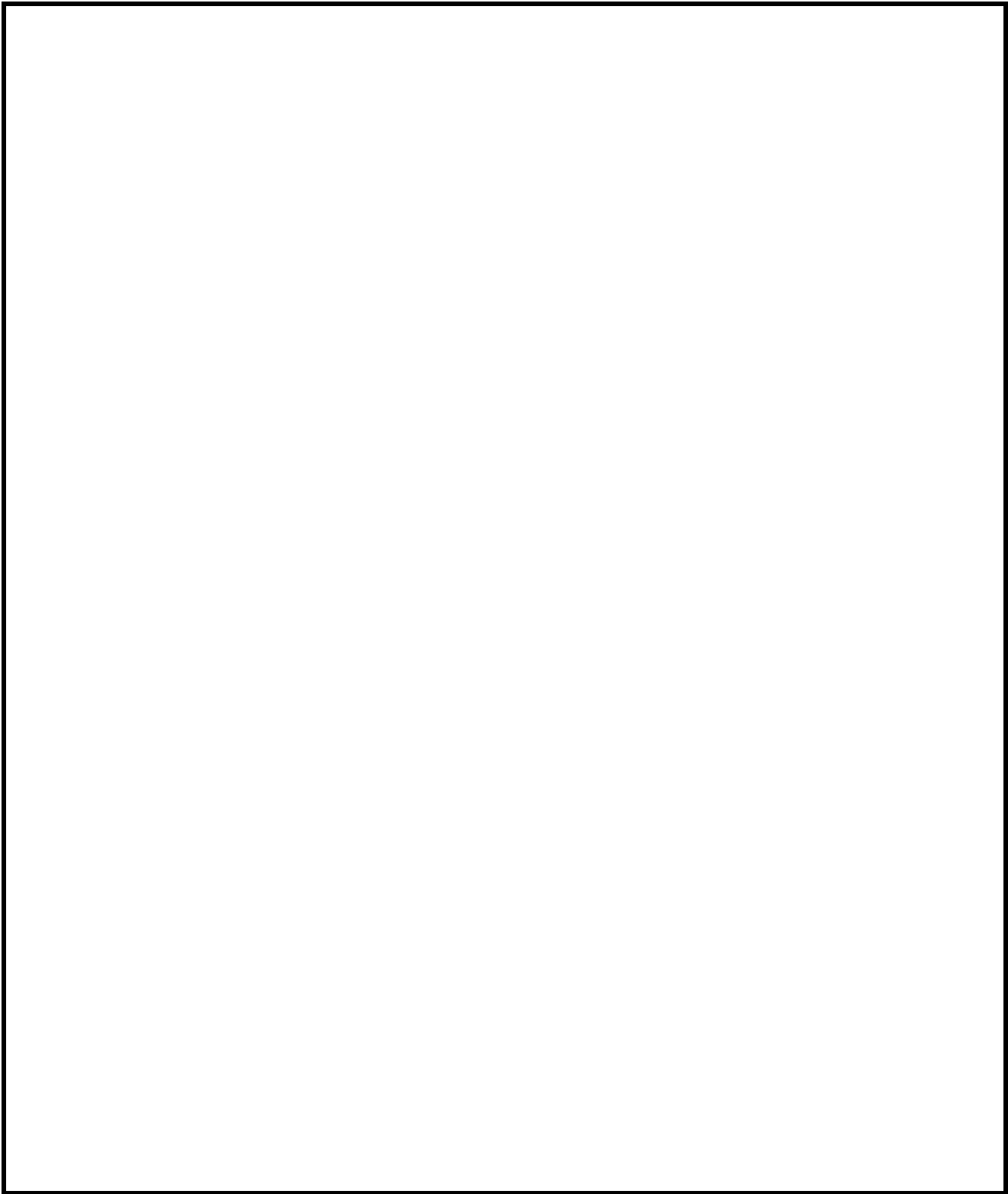
May 15	Last day for reporting results on comprehensive examinations to the Division of Graduate Affairs by department or college.
May 21	Final day for depositing approved theses at Aztec Shops Montezuma Publishing. (Noon deadline.)
May 21	Commencement, Imperial Valley Campus
May 22-24	Commencement days, main campus.
May 25	Holiday – Memorial Day. Faculty/staff holiday. Campus closed.
May 26	Grades due from instructors. (11:00 p.m. deadline.)
May 26	Last day to apply for a leave of absence for spring semester 2009.
May 26	Last day for submitting theses to the Division of Graduate Affairs for the current term.
May 26	Last day of spring semester.

**SUMMER TERM 2009**

NOTE:	Summer session dates to be determined. Refer to SDSU Summer Session <i>Class Schedule</i> .
May 29	Last day to apply for August 2009 graduation with an advanced degree, Division of Graduate Affairs.
July 2	Final day for submitting theses to the Division of Graduate Affairs for thesis review to ensure graduation in August 2009.
July 3	Holiday – Independence Day observed. Faculty/staff holiday. Campus closed.
July 4	Holiday – Independence Day. Faculty/staff holiday. Campus closed.
July 6-August 21	Theses may be submitted to the Division of Graduate Affairs on an at-risk basis. However, August 2009 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.
July 31	Last day for submission of Incomplete and RP grade removals (excluding thesis) for summer graduation with an advanced degree.
August 14	Last day for reporting results on comprehensive examinations to the Division of Graduate Affairs by department or college.
August 19	Final day for depositing approved theses at Aztec Shops Montezuma Publishing. (Noon deadline.)
August 21	Last day for submitting theses to the Division of Graduate Affairs for the current term.

*(Please Note: This is not to be construed as an employee work calendar and is subject to change. Refer to SDSU Web site for any changes to this calendar.)*







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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 Relations and  
Development . . . . . Mary Ruth Carleton

## Academic Administration

### ACADEMIC AFFAIRS

Provost . . . . . Nancy A. Marlin  
Associate Vice President for Academic Affairs . . . . . Ethan A. Singer  
Associate Vice President for Faculty Affairs . . . . . Bonnie S. Zimmerman  
Assistant Vice President for Academic Services . . . . . Jane K. Smith  
Assistant Vice President for  
International Programs . . . . . Alan R. Sweedler

### ACADEMIC DEANS

College of Arts and Letters . . . . . Paul Wong  
College of Business Administration . . . . . Gail K. Naughton  
College of Education . . . . . Ric A. Hovda  
College of Engineering . . . . . David T. Hayhurst  
College of Health and Human Services . . . . . Marilyn Newhoff  
College of Professional Studies and Fine Arts . . . . . Joyce M. Gattas  
College of Sciences . . . . . Stanley R. Maloy  
Library and Information Access . . . . . Connie Vinita Dowell  
College of Extended Studies . . . . . William E. Byxbee  
Division of Undergraduate Studies . . . . . Geoffrey W. Chase  
Imperial Valley Campus . . . . . Stephen B.W. Roeder

### GRADUATE AND RESEARCH AFFAIRS

Vice President for Research and Graduate Dean . . . . . Thomas R. Scott  
Associate Dean for Policy . . . . . Christopher C. Glembotski  
Director for Division of Research Affairs . . . . . Camille Nebeker

### THE GRADUATE COUNCIL

The Graduate Council of San Diego State University consists of the Vice President for Research and Graduate Dean (chair), the Associate Dean for Policy, the Provost, the Vice President for Research and Graduate Dean, Director for Research Affairs, Dean of the Library and Information Access, members of the faculty from the various schools and colleges, and two classified graduate students. For the academic 2007-08 year, the membership of the council was as follows:

Thomas R. Scott, Chair . . . . . Vice President for Research and  
Graduate Dean  
Christopher C. Glembotski . . . . . Associate Dean for Policy  
Nancy A. Marlin (*ex officio*) . . . . . Provost  
Thomas R. Scott (*ex officio*) . . . . . Vice President for Research  
and Graduate Dean  
Camille Nebeker (*ex officio*) . . . . . Director for Division of Research Affairs  
Connie Vinita Dowell (*ex officio*) . . . . . Dean of the Library  
and Information Access  
Mark R. Lester (*ex officio*) . . . . . Director of Access, Communication  
and Fiscal Services, Library  
Edward Aguado . . . . . Department of Geography  
Leland L. Beck . . . . . Department of Computer Science  
José E. Castillo . . . . . Department of Mathematics and Statistics  
Roger W. Caves . . . . . School of Public Affairs  
Andrew Q. Do . . . . . Department of Finance  
Martha S. Doran . . . . . School of Accountancy  
Patricia J. Geist-Martin . . . . . School of Communication  
Gordon K. F. Lee . . . . . College of Engineering  
Fred R. McFarlane . . . . . Department of Administration, Rehabilitation  
and Postsecondary Education  
Eugene A. Olevsky . . . . . Department of Mechanical Engineering  
Ramona L. Perez . . . . . Department of Anthropology  
Lucinda A. Rasmussen . . . . . School of Social Work  
Carol A. Robinson-Zañartu . . . . . Department of Counseling and  
School Psychology  
Lembi Saarmann . . . . . School of Nursing  
Jeanette Shumaker . . . . . Imperial Valley Campus  
. . . . . Associated Students  
. . . . . Associated Students

(Membership for 2008-09 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 vice president for research. 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
- Student Research Committee
- University Copyrights and Patents
- University Research Grants-Lectureships

For the academic 2007-08 year, the membership of the council was as follows:

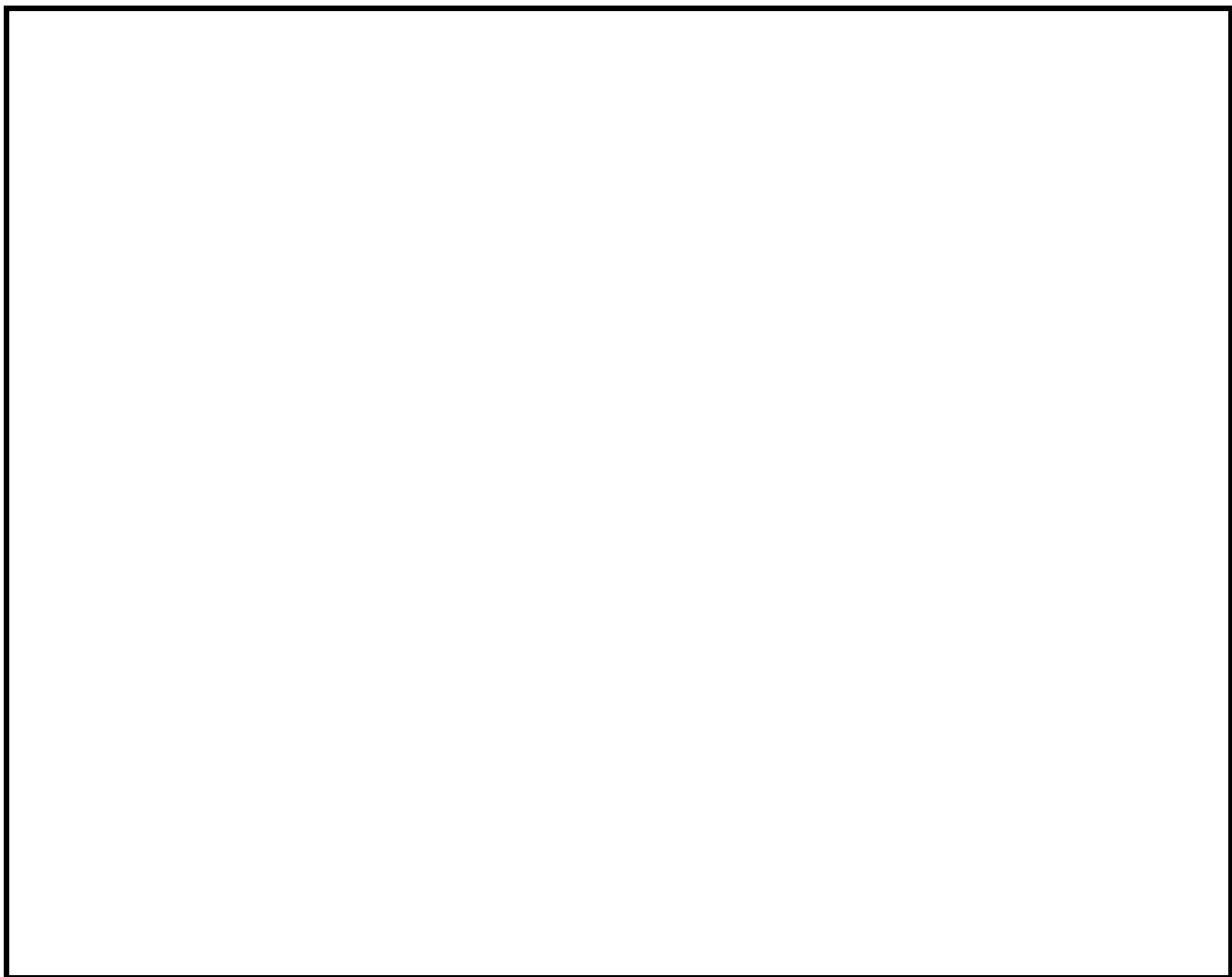
Thomas R. Scott, Chair . . . . . Vice President for Research  
and Graduate Dean  
Camille Nebeker (*ex officio*) . . . . . Director for Division of  
Research Affairs



Christopher C. Glembotski (*ex officio*) . . . . Associate Dean for Policy  
Division of Graduate Affairs  
Thomas R. Scott (*ex officio*) . . . . . Chief Executive Officer  
SDSU Research Foundation (Interim)  
Jessica A. Barlow . . . . . School of Speech, Language, and  
Hearing Sciences  
Sanford I. Bernstein . . . . . Department of Biology  
Brian K. Finch . . . . . Department of Sociology  
Christopher Frost . . . . . Division of Undergraduate Studies  
Christopher C. Glembotski . . . . . Department of Biology  
Douglas B. Grotjahn . . . . Department of Chemistry and Biochemistry  
Gary M. Grudnitski . . . . . School of Accountancy  
Greg L. Harris . . . . . Department of Biology  
Victoria R. Jacobs . . . . . School of Teacher Education  
Fred W. Kolkhorst . . . . . School of Exercise and Nutritional Sciences  
Gordon K. F. Lee . . . . . College of Engineering  
Susan S. Levy . . . . . School of Exercise and Nutritional Sciences

Joni A. Mayer . . . . . Graduate School of Public Health  
Karen D. May-Newman . . . . Department of Mechanical Engineering  
Jeanne F. Nichols-Bernhard . . . . . School of Exercise and  
Nutritional Sciences  
Michael J. Perkins . . . . . Library and Information Access  
Scott C. Roesch . . . . . Department of Psychology  
Richel Thaler . . . . . Business and Financial Affairs  
Yeongling Helio Yang . . . . . Department of Information and  
Decision Systems  
Sheldon X. Zhang . . . . . Department of Sociology

**(Membership for 2008-09 will be determined prior to the beginning of the academic year.)**









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# Division of Graduate Affairs

**OFFICE: Student Services 1410**  
**TELEPHONE: 619-594-5213**  
**FAX: 619-594-0189**  
**E-MAIL: [gra@mail.sdsu.edu](mailto:gra@mail.sdsu.edu)**

As part of Graduate and Research Affairs, the Division of Graduate Affairs (DGA) is the administrative unit responsible for post-baccalaureate and graduate study at San Diego State University. The DGA is composed of the academic units that offer graduate study in the university. The faculties of these units provide programs in over 70 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 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 Division of Graduate Affairs 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 post-baccalaureate 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. 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 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; affecting the educational opportunities of 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. Today, 14 Ph.D. programs serve several hundred students. Some of these doctoral programs are in traditional academic disciplines while others had a more professional orientation such as in public health, clinical psychology, and language and communicative disorders. True to its historical tradition of emphasizing study in the discipline of education, the university offers 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 extramural 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. SDSU will continue to develop programs to address issues of societal concern as they arise. Inevitably, other programs will disappear as circumstances and intellectual questions change. The result 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 (Cell and Molecular)	Geography
Chemistry	Language and Communicative Disorders
Clinical Psychology	Mathematics and Science Education
Computational Science	Public Health/Epidemiology
Computational Science/Statistics	Public Health/Global Health
Ecology	Public Health/Health Behavioral Science
Education	
Engineering Sciences/Applied Mechanics	

### DOCTOR OF EDUCATION

Education  
PreK-12 School Leadership  
Educational Leadership: Community College/  
Postsecondary Leadership

### PROFESSIONAL DOCTORATE

The professional doctorate degree is offered in the following field:  
Audiology

### EDUCATIONAL SPECIALIST

The educational specialist degree is offered in the following field:  
Ed. S in School Psychology

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

### 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	Homeland Security
Bioinformatics and Medical Informatics	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

### PROFESSIONAL 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 Arts in Education with a Concentration in Counseling and the Educational Specialist in School Psychology  
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 Arts in Latin American Studies  
Master of Science in Nutritional Science and  
Master of Science in Exercise Physiology  
Master of Social Work and Juris Doctor  
Master of Social Work and Master of Public Health

## 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  
real estate  
supply chain management  
taxation

**Civil Engineering (MS)**

*Concentration:*

environmental engineering

**Computational Science (MS)**

*Concentration (MS):*

professional applications

*Concentration (PhD):*

statistics

**Counseling (MS)**

*Concentrations:*

marriage and family therapy  
school counseling

**Education (MA)**

*Concentrations:*

counseling  
educational leadership  
educational research  
educational technology  
elementary curriculum and instruction  
mathematics education (K-8)  
policy studies in language and cross-cultural education  
reading education  
secondary curriculum and instruction  
special education

**Geography (MS)**

*Concentrations:*

geographic information science  
watershed science

**Nursing (MS)**

*Concentrations:*

advanced practice nursing of adults and the elderly  
community health nursing  
nursing education  
nursing leadership in health care systems

**Psychology (MS)**

*Concentrations:*

applied psychology  
clinical psychology (included within the PhD 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 (PhD):*

epidemiology  
global health  
health behavioral science

**Speech, Language, and Hearing Sciences (MA)**

*Concentrations:*

audiology  
communicative sciences  
education of the deaf  
speech-language pathology

**Statistics (MS)**

*Concentration:*

biostatistics

**Theatre Arts (MFA)**

*Concentrations:*

acting  
design and technical theatre  
musical theatre

**Credentials Offered**

**Teaching Credentials**

Multiple subject

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

Multiple subject bilingual cross-cultural

language and academic development (BCLAD)  
emphasis: Spanish

Multiple subject and special education bilingual (Spanish)

Single subject

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

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

**Specialist Credentials**

Bilingual Cross-Cultural

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 services

Clinical-rehabilitative services

Pupil personnel services:

child welfare and attendance

school counseling

school psychology

school psychology (internship credential)

school social work

School nurse services



## Graduate Certificate Programs (nondegree)

- Certificate in academic literacy development for English language learners
- Certificate in advanced children's/adolescent literature
- Certificate in advanced teaching of writing
- Certificate in artist diploma
- Certificate in bilingual cross-cultural language and academic development (BCLAD)
- Certificate in bilingual speech language pathology
- Certificate in communications systems
- Certificate in community college teaching
- Certificate in cultural and community trauma studies
- Certificate in developing gifted potential
- Certificate in distance education
- Certificate in dual language biliteracy
- Certificate in early childhood special education
- Certificate in educational facility planning
- Certificate in instructional design
- Certificate in instructional technology
- Certificate in mathematics specialist
- Certificate in nursing education
- Certificate in preK-12 educational leadership
- Certificate in preventive medicine residency
- Certificate in primary grade writing instruction
- Certificate in professional computational science
- Certificate in psychiatric rehabilitation
- Certificate in regulatory affairs
- Certificate in rehabilitation administration
- Certificate in rehabilitation technology
- Certificate in supported employment and transition specialist
- Certificate in teaching English as a second or foreign language (TESL/TEFL)
- Certificate in transborder public administration governance
- Certificate in workforce education and lifelong learning

## Graduate Certificate Programs

The advanced certificate at the post-baccalaureate 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. Courses taken for advanced certificate program may be applied to a master's degree with the approval of the graduate adviser.

## 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 West, 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 Division of Graduate Affairs 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 Division of Graduate Affairs at San Diego State University, 5500 Campanile Drive, San Diego, CA 92182. The phone number is 619-594-5213. The Division of Graduate Affairs is located in Student Services East, Room 1410. 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. Information about the available programs as well as the academic standards that a student must maintain to remain eligible for such aid can be accessed at <http://www.sdsu.edu/financialaid>.

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>.

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, 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, speech, language, and hearing sciences, 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 Division of Graduate Affairs, 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 Division of Graduate Affairs 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 Division of Graduate Affairs, 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 Research 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 Research 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 Research 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 \$339 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. The number of students receiving tuition waivers is limited.

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 in good academic standing who have an appointment as a teaching associate, graduate assistant, or research assistant. Students must be appointed for 20 hours per week or be enrolled in at least 10 units. Domestic non-residents are only eligible for one year. International students may qualify for a continuation beyond their first year.

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 Division of Graduate Affairs.

### 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

San Diego State University awards scholarships to students to recognize and encourage individual talents, academic excellence, leadership skills, and the determination to succeed in spite of significant hardships. Scholarships are also awarded to students to support participation in SDSU approved study abroad programs, community service programs, and faculty approved conference attendance that is part of a student's SDSU curriculum. All students, regardless of nationality, citizenship, residency status, area of study, or grade point average are encouraged to apply for as many scholarships as possible.

Applications and specific requirements are available on the SDSU Office of Financial Aid and Scholarships Web site at <http://www.sdsu.edu/financialaid>. Deadlines vary and new SDSU scholarship opportunities are added to the Web site throughout the year. The main SDSU scholarship application filing period is November through early February for awards paid in the following academic year. A second filing period extends from early March through April. Applications accepted August through October offer awards paid in the current academic year.

The Office of Financial Aid and Scholarships coordinates the SDSU scholarship application and awarding process with the committees from the various academic departments and organizations responsible for selecting recipients. Scholarship funds are provided by private donors, corporations, professional associations, and SDSU alumni.

### Other Scholarship Resources and Links

The Office of Financial Aid and Scholarships Web site also lists resources and links to outside scholarship information and free search Web sites.

### National Fellowships

The Office of Financial Aid and Scholarships 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 designated campus adviser and with members of the university faculty 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 Student Testing, Assessment and Research Office.

### 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 Division of Graduate Affairs application available at the Division of Graduate Affairs and Research office, and the Free Application for Federal Student Aid (FAFSA). The Division of Graduate Affairs application, for continuing students, must be submitted by June of each year.

### CSU Forgivable Loan Program

The Forgivable Loan Program provides financial assistance to graduate students who show promise of becoming strong candidates for California State University instructional faculty positions. The purpose of the program is to increase the pool of individuals with the qualifications, motivation, and skills to teach the diverse student body

in the California State University. It is a competitive program directed by the CSU but open to doctoral students across the country. Through the Forgivable Loan Program, the CSU offers loans and faculty sponsorship to full-time students pursuing doctoral degrees who are interested in a teaching career at a CSU campus. The program provides loans of up to \$10,000 per year up to a total of \$30,000 within five years. Loan forgiveness is 20 percent of the loan forgiven for each year of full-time postdoctoral teaching at a CSU campus and faculty sponsorship from a CSU faculty member. The CSU does not guarantee a faculty position to any participant in the Forgivable Loan Program. However, it is expected that upon completion of their doctoral studies, participants will be qualified to compete for CSU faculty positions. Applications are available at all CSU campuses; our campus has a Forgivable Loan Program coordinator in the Division of Graduate Affairs. You may also obtain an application and information at

[http://www.calstate.edu/HR/FLP/info\\_applicant.shtml](http://www.calstate.edu/HR/FLP/info_applicant.shtml).

### California Pre-Doctoral Program

The program is designed to increase the pool of university faculty by supporting the doctoral aspirations of individuals who are current upper division or graduate students in the California State University, economically and educationally disadvantaged, interested in a university faculty career, U.S. citizens or permanent residents, and leaders of tomorrow. Junior, senior, and graduate students in the CSU, especially those from environments where university teaching is not a common career goal, have unique opportunities to explore and prepare to succeed in doctoral programs. Working one-on-one with faculty members from both CSU and doctoral-granting institutions, students receive funding for activities such as participation in a summer research internship program at a doctoral granting institution to receive exposure to the world of research in their chosen field, visits to doctoral-granting institutions to explore opportunities for doctoral study, and travel to national symposiums for professional meetings in their chosen field. Other related activities include membership in professional organizations, journal subscriptions, graduate school application, and test fees. For information regarding the California Pre-Doctoral Program contact the campus co-coordinator in the Division of Graduate Affairs or go to <http://www.calstate.edu/PreDoc/advisors.shtml>.

### 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.

There is no funding to provide new awards for the 2008-09 academic year.



# Fees

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

For updated information regarding the fee structure for 2008-2009 refer to the online fall *Class Schedule* or Student Financial Services Web site at <http://www.sdsu.edu/sfs>.

Fees must be paid prior to accessing the Web Portal to register. Checks are accepted for the exact amount of fees. Overpayments of \$10.00 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 \$55.00 (a dishonored payment charge of \$35.00 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 unpaid by their bank. Refunds may be applied against other amounts due to the university. Checks to be made payable to SDSU. Do not enclose cash.

You may pay your fees online using your checking account information. There is no additional fee assessed for this service. Visit the Student Financial Services Web site at <http://www.sdsu.edu/sfs> and see Online Services.

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://commerce.cashnet.com/sdsu\\_sp](http://commerce.cashnet.com/sdsu_sp). You may now access CASHNet™SmartPay directly from your online student account. Select the link located in the "Your Account" box to pay by credit card. 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.

## ADMINISTRATIVE/FINANCIAL HOLDS

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

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

## REGISTRATION FEES – ALL STUDENTS:

(On basis of units carried.)

Fee payment information and instructions are in the *Class Schedule* available at <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, other zero unit courses, and half unit courses are charged as one unit for fee purposes.

### FALL 2008/SPRING 2009

<i>Units Attempted</i>	<i>Registration Fee</i>
<b>Undergraduate</b>	
0 units – 6.0 units.....	\$1,132.00
6.1 or more units .....	\$1,714.00
<b>Graduate</b>	
0 units – 6.0 units.....	\$1,318.00
6.1 or more units .....	\$2,035.00

### Teaching Credential Candidates

0 units – 6.0 units.....	\$1,261.00
6.1 or more units .....	\$1,936.00

### Doctoral Students\*

0 units – 6.0 units.....	\$4,018.00
6.1 or more units .....	\$4,018.00

\* Does not include joint doctoral students.

The above fee includes a Student Body Association Fee of \$15.00, a Student Union Fee of \$98.00, a Health Facilities Fee of \$25.00, an Instructionally Related Activities Fee of \$95.00, a Health Services Fee of \$85.00, a Library Use Fee of \$10.00, and a State University Fee of either \$732.00 or \$1,260.00 for undergraduate students, \$900.00 or \$1,551.00 for graduate students, \$849.00 or \$1,461.00 for teaching credential candidates, or \$3,690.00, depending on unit load.

As this catalog goes to print, there has been a proposed increase in the Student Body Association Fee of \$20.00 and the Library Use Fee of \$5.00 subject to student referendum and the approval of the president.

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. Imperial Valley Campus students do not pay the Library Use Fee. 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

**Registration Fees.** An installment plan is available for students who wish to pay their registration fees in payments. There is a \$33.00 service 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.

**Tuition (Foreign and Out-of-State).** An installment plan is available for students who wish to pay their tuition in payments. There is a 15% service charge applied to each installment payment. Installment contracts for the tuition installment plan are available at the University Cashiers Office two weeks prior to the first day of classes.

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

Tuition will be charged for all units attempted.

Per unit ..... \$339.00\*  
(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 ..... 700.00

\*Not to exceed \$10,170.00 for the fall/spring semesters.

**PARKING FEES**

Nonreserved parking space, per semester .....	\$135.00
Less than four-wheeled, self-propelled vehicle (motorcycle, moped) .....	34.00
Combined student/overnight parking surcharge, per semester .....	213.00

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 Student Disability Services Office (Calpulli Center, Room 1301).

**MISCELLANEOUS FEES**

(Fees payable when service is rendered.)

Application for admission or readmission (nonrefundable).....	55.00
Application to Teacher Education Credential Program (in addition to \$55.00 application for admission) .....	25.00
Counseling Diversion Program fee (missed appointment fee \$30.00) .....	100.00
Credential application fee* .....	55.00
Credential evaluation fee .....	25.00
Diploma replacement fee .....	12.00
Document copying fee .....	1.00
Enrollment confirmation deposit fee (nonrefundable).....	250.00
Failure to meet administratively required appointment or time limit (late fee) .....	20.00
Fingerprinting fee (plus applicable DOJ and FBI fees) .....	17.00
Graduation services fee.....	55.00
Interest inventory assessment .....	10.00
Late course forgiveness .....	20.00
Late registration (nonrefundable) (Refer to <i>Class Schedule</i> for dates when this fee will be assessed.) .....	25.00
Latin diploma .....	22.00
Lock and locker fee (optional) .....	1.00
Loss of or damage to library materials .....	Replacement cost plus \$8.00 service charge
Lost key fee (per key) .....	10.00
Lost photo identification card Photo I.D. Card replacement .....	10.00
Musical instrument and audio/visual equipment fee .....	20.00
Photo-identification card (One-time cost to both new undergraduate and graduate students at time of registration.) Non-refundable .....	5.00
Registration installment plan service charge .....	33.00
Returned payment fee** .....	35.00
Towel fee (optional) .....	4.00
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
On Demand Transcript .....	20.00
Additional copy prepared at the same time as the first .....	5.00
Tuition (Foreign or Out-of-State) installment payment plan service charge.....	Equal to 15 percent of each installment payment

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

\*\*Late fee also charged when applicable.

**MISCELLANEOUS INSTRUCTIONAL COURSE CHARGES**

Optional and mandatory course charges are assessed for a number of courses and laboratories offered at SDSU.

A list of the courses and fee amounts can be found at <http://www.sdsu.edu/sfs> under Financial Information/Course Fees. The courses are also footnoted in the *Class Schedule*.

**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 (American Express, MasterCard, Discover Card and Diners Club 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 University Cashiers 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 15th day** following the commencement of instruction. Foreign and out-of-state students are also liable for tuition related to all **units held on or added after the close of business on the 15th day** following the commencement of instruction.

All continuing students participating in online registration 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. Foreign students must pay or sign an installment agreement for a minimum of 12 units (9 units graduate) at the time of registration. Undergraduate foreign students wishing to pay fewer than 12 units and graduate students wishing to pay fewer than nine units must submit an approved Application for Reduced Course Load available through the International Student Center.

**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 \$35.00 dishonored payment charge and the \$20.00 late fee when applicable. Nonpayment of fees or tuition may result in cancellation of your registration and withholding of further services until all financial liabilities have been resolved.

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 (less a \$21.00 refund administrative fee), including nonresident 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 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 of instruction 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>. Refunds may be applied against other amounts due to the university.

### Return to Title IV Financial Aid Requirements

The following 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:

- Academic Competitiveness Grant
- Federal Direct PLUS Loan
- Federal Pell Grant
- Federal Perkins Loan
- Federal Supplemental Educational Opportunity Grant (FSEOG)
- National SMART Grant
- Subsidized Federal Direct Loan
- Unsubsidized Federal Direct Loan

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 12th 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.

### 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:

**Section 68120** – Qualifying children and surviving spouses/registered domestic partners of deceased public law enforcement or fire suppression employees who were California residents and who were killed in the course of active law enforcement or fire suppression duties (referred to as Alan Pattee Scholarships);

**Section 66025.3** – Qualifying children, spouses/registered domestic partners, or unmarried surviving spouses/registered domestic partners 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, was killed in action, or died of a service-connected disability and meets specified income provisions; any dependents or surviving spouse/registered domestic partner who has not remarried 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 certain age and income restrictions; and

**Section 68121** – Qualifying students enrolled in an undergraduate program who are the surviving dependent(s) 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 was 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 post-baccalaureate 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 Body Association Fee

The law governing the California State University provides that fees defined as mandatory, such as a student body association fee and a student activity center fee may be established. A student body 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 body 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 body fee was

established at San Diego State University by student referendum in 1955. The campus president may adjust the student body 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 percent of the regularly enrolled students at the university. Once bonds are issued, authority to set and adjust student body 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 body 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 a student referendum. The campus president may use alternative consultation mechanisms if he/she 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 adjust campus-based mandatory fees, but must request the chancellor to establish a new mandatory fee.

For more information or questions, contact Rosa H. Renaud, Financial Manager, Financing and Treasury in the CSU Chancellor's Office at 562-981-4570 or [rrenaud@calstate.edu](mailto:rrenaud@calstate.edu).

## 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 to receive official transcripts of grades or other services offered by the institution from anyone owing fees or another debt to the institution. 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 Cashiers Office may refer the person, will review all pertinent information provided by the person and available to the campus and will advise the person of its conclusions.

For more information or questions, contact Rosa H. Renaud, Financial Manager, Financing and Treasury in the CSU Chancellor's Office at 562-981-4570 or [rrenaud@calstate.edu](mailto:rrenaud@calstate.edu).

## 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. A description of the federal, state, institutional, local, and private student financial assistance programs available to students who enroll at San Diego State University;
2. For each aid program, a description of procedures and forms by which students apply for assistance, student eligibility requirements, criteria for selecting recipients from the group of eligible applicants, and criteria for determining the amount of a student's award;



## Fees

3. A description of the rights and responsibilities of students receiving financial assistance, including federal Title IV student assistance programs, and criteria for continued student eligibility under each program;
4. The satisfactory academic progress standards that students must maintain for the purpose of receiving financial assistance and criteria by which a student who has failed to maintain satisfactory progress may reestablish eligibility for financial assistance;
5. The method by which financial assistance disbursements will be made to students and the frequency of those disbursements;
6. The terms of any loan received as part of the student's financial aid package, sample loan repayment information, and the necessity for repaying loans;
7. The general conditions and terms applicable to any employment provided as part of the student's financial aid package;
8. The responsibility of San Diego State University for providing and collecting exit counseling information for all student borrowers under the federal student loan programs; and
9. The terms and conditions for deferral of loan payments for qualifying service under the Peace Corps Act, the Domestic Volunteer Service Act of 1973, or comparable volunteer community service.

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, board, and transportation 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 Student Disability Services, Calpulli Center, Room 3100, 619-594-6473, TDD 619-594-2929, 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 the Department of Public Safety, 619-594-1991, or at <http://www.police.sdsu.edu>.

Information concerning San Diego State University annual campus security report may be obtained from the Department of Public Safety, 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, Calpulli Center, Room 4401, 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 teacher preparation programs at San Diego State University, including pass rate on teacher certification examinations, may be obtained from the Office of Advising and Recruitment, Business Administration, Room 259, 619-594-6320.

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 ombudsman, 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

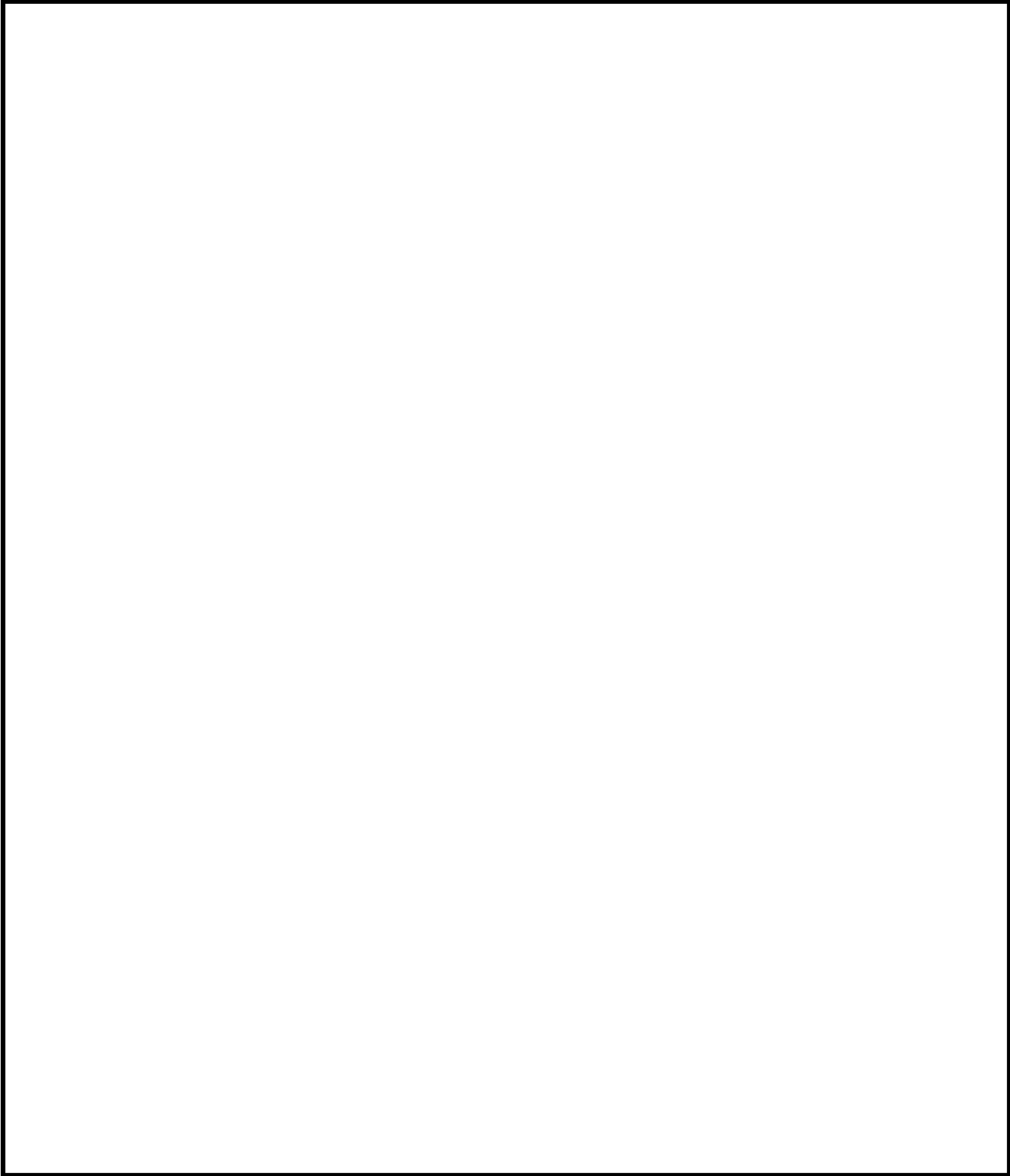
San Diego State University establishes standard student budgets in coordination with the California State University system that meet federal requirements. Student budgets, updated annually to account for inflation are currently:

### Costs of Attendance for the 2008-2009 Academic Year

	Living off Campus	Living on Campus	Commuting from Home
Registration fees.....	\$3,428	\$3,428	\$3,428
Books and supplies.....	1,566	1,566	1,566
Food and housing.....	9,930	11,266	3,642
Transportation.....	1,616	1,262	1,300
Miscellaneous/Personal.....	2,650	2,540	2,730
Total .....	\$19,190	\$20,062	\$12,666

The academic year registration fee for a post-baccalaureate student is \$4,070 and \$3,872 for a teaching credential student. In addition to the registration fee, nonresident (foreign and out-of-state) students pay tuition of \$339 per unit (see Schedule of Fees section).

**All fees and costs are subject to change without notice.**



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# Admission to Post-Baccalaureate and Graduate Study

Admission to San Diego State University for post-baccalaureate 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, when requested, 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 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 number to identify students and their records including identification 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, financial transactions, and all student services.

## Schedule Adjustment Policy

All schedule adjustments (formerly called Change of Program) **MUST BE COMPLETED BY THE END OF THE 15th CLASS DAY OF THE SEMESTER BY 6:00 P.M.** 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.

## Absence from Class

### 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.

### Religious Observances

By the end of the second week of classes, students should notify the instructors of affected courses of planned absences for religious observances. Instructors shall reasonably accommodate students who notify them in advance of planned absences for religious observances.

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

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

## Application Procedures

Applicants for any type of graduate or post-baccalaureate status (advanced degree applicants and those seeking credentials or advanced certificates) must file an electronic CSU Graduate Admission Application available at <http://www.csumentor.edu/> 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 post-baccalaureate programs may be limited to the choice of a single CSU campus on each application, redirection to alternative campuses or later changes of campus choice will be minimal. In the event that a post-baccalaureate 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 department or program listing in the *Graduate Bulletin* for the specific department and/or program application instructions. In all cases, applicants should send official transcripts and examination

scores to Graduate Admissions only. Students are required to apply online. Online applications are available at <http://www.csumentor.edu/>.

Paper applications are no longer printed for general distribution. If an applicant does not have access to a computer or in the case of other extenuating circumstances preventing an applicant from filing an electronic admission application, the applicant should contact Graduate Admissions to make special arrangements.

### 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 Graduate Admissions. Please 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.

### General Admission Requirements

Applicants for any type of graduate 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.

Faculty may register for courses in accordance with the Division of Graduate Affairs policies. Faculty holding the rank of instructor and above may be candidates for degrees on this campus. Faculty may not seek degrees or register for courses within their own departments, programs, or schools and retain faculty status in that unit.

#### 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.

### Examination Requirements

The university requires that applicants for admission to advanced degree 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. Some advanced certificate programs require the GRE. 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) in lieu of the GRE; students applying for admission to the concentration in Health Services Administration in the Graduate School of Public Health may submit scores from either the GRE or the GMAT. Students applying for admission to the MSW/JD program will use LSAT scores in lieu of the GRE. Students applying for admission to the MBA/JD program must submit GMAT and LSAT scores. GRE, GMAT, TOEFL, and IELTS scores should be sent electronically to San Diego State University (Institutional Code 4682 for GRE and TOEFL, and 9LT-2P-73 for GMAT). For complete information on the availability of these tests, students or applicants are invited to contact the Student Testing, Assessment and Research Office on campus.

Students who hold advanced degrees from institutions that are members of the Council of Graduate Schools may be 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. Applicants to doctoral programs must have taken the GRE.

### TOEFL/IELTS Requirements

All graduate and post-baccalaureate 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 or higher (using the paper version) or 213 or higher (using the computer version) or 80 or higher (using the Internet version) on the Test of English as a Foreign Language (TOEFL). Students must obtain a score of 6.5 or better on the International English Language Testing System (IELTS). Individual degree programs may require a higher minimum score. Applicants may be required by a program to 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 post-baccalaureate study at San Diego State University must apply and be accepted in one of the following categories:

#### Post-Baccalaureate Standing (Unclassified)

Exchange students (non-foreign), visitors from other CSU campuses, and other transitory students may be admitted for **one** semester as unclassified graduate students.

#### Post-Baccalaureate 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 post-baccalaureate standing (classified) does not constitute admission to, or assurance of consideration for admission to, advanced degree curricula.

#### Graduate Standing (Classified)

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

- Achieve a satisfactory score on the GRE General Test. (Students holding an advanced degree from an institution that is a member of the Council of Graduate Schools are exempted from this requirement; students applying to the College of Business Administration will take the (GMAT) Graduate Management Admission Test.)
- Satisfy the special departmental or college requirements as stated in Part Three of the *Graduate Bulletin* under "Curricula."
- 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.

#### Graduate Standing (Conditional 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 (conditional classified), if the deficiencies can be met by specific additional preparation, including qualifying examinations. Students who have not completed the GRE/GMAT requirement and/or the TOEFL/IELTS requirement will not be eligible for conditional admission. Not more than 15 semester units may be assigned to satisfy undergraduate deficiencies in the major and normally all course conditions must be met within two semesters from the time of initial enrollment. Students admitted with conditional graduate standing (conditional 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 Division of Graduate Affairs.

#### Post-Baccalaureate Standing (Conditional Classified, Credential, and Certificate)

A student wishing to be admitted to a program of study leading to a credential in professional education or a certificate program who meets the criteria specified under General Admission Requirements but who has deficiencies for unconditional classified admission to

the department's credential or certificate program may be granted conditional classified post-baccalaureate standing, 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 post-baccalaureate 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 Division of Graduate Affairs. 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.

#### 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. 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.

### Filing of Transcripts

The applicant must arrange to have one set of official transcripts from EACH college or university attended sent to Graduate Admissions. Transcripts should be requested to be sent after the CSU application has been submitted online. 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 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 post-baccalaureate and graduate study at the university.

Students pending graduation must submit an official transcript verifying completion of an undergraduate degree within the first semester of attendance. Students who fail to submit their final degree transcript will not be eligible to register the following semester. Students who are restricted from registering will be required to reapply for admission. Foreign and domestic students from foreign universities whose undergraduate degrees have not been verified on an official transcript may submit an official letter of completion from the foreign university.

### Determination of Residence for Nonresident Tuition Purposes

University requirements for establishing residency are independent from those of other types of residency, such as for tax purposes, or other state or institutional residency. A resident for tuition purposes is someone who meets the requirements set forth in the Uniform Student Residence Requirements. These laws governing residence for tuition purposes at the California State University are *California Education Code* sections 68000-68090, 68120-68134, and 89705-89707.5, and *California Code of Regulations*, Title 5, Subchapter 5, Article 4, 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/GC/resources.shtml>.



These regulations were promulgated not to determine whether a student is a resident or nonresident of California, but rather to determine whether a student should pay university fees on an in-state or out-of-state basis. Graduate Admissions is responsible for determining the residence status of all new and returning students based on the Application for Admission, Residence Reclassification Request Form, and, as necessary, other evidence furnished by the student. A student who fails to submit adequate information to establish eligibility for resident classification will be classified as a nonresident.

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, can demonstrate both physical presence in the state combined with evidence of intent to remain in California indefinitely may establish California residence for tuition purposes. A minor normally derives residence from the parent(s) they reside with or most recently resided with.

Evidence demonstrating intent can vary from case to case but will include, and is not limited to, the absence of residential ties to any other state, California voter registration and voting in California elections, maintaining California vehicle registration and driver's license, maintaining active California bank accounts, filing California income tax returns and listing a California address on federal 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.

Non-citizens establish residence in the same manner as citizens, unless precluded by the Immigration and Nationality Act from establishing domicile in the United States. Exceptions to the general residence requirements are contained in *California Education Code* sections 68070-68084 and *California Code of Regulations*, Title 5, Subchapter 5, Article 4, sections 41906-41906.5, and include, but are not limited to, members of the military and their dependents, certain credentialed employees of school districts, and most students who have attended three years of 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 on parents who cannot satisfy university requirements for classification as residents for tuition purposes, which will be considered along with physical presence and intent in determining reclassification. Reclassifications are coordinated through the Office of the Registrar.

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).

Students classified as non-residents may appeal a final campus decision within 120 days of notification by the campus. A campus residence classification appeal must be in writing and submitted to:

The California State University  
Office of General Counsel  
401 Golden Shore, 4th Floor  
Long Beach, CA 90802-4210

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 also 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 the Registrar.

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 temporary 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 post-baccalaureate 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/IELTS if required. 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 college or university 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 degree is verifiable from the student's official transcript;
3. The San Diego State University graduate adviser or department chair makes a strong written recommendation for admission supporting why this student is important to their program and verifying the student has fulfilled preparation for the degree coursework.

All students in this category will be admitted as conditionally classified students with appropriate conditions for being granted classified standing and a deadline by which the conditions must be met that is no later than two semesters after entry to the program.

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) or 80 or higher (using the Internet version) on the Test of English as a Foreign Language (TOEFL), or 6.5 or better on the International English Language Testing System (IELTS). Consult Part III of this bulletin for specific program requirements. These tests are 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 these tests are given may be obtained by going to Web sites at <http://www.toefl.org> and <http://www.ielts.org>.

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.

## Admission to Post-Baccalaureate and Graduate Study

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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 may be 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) or IELTS (International English Language Testing System) 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 or IELTS scores and training at the American Language Institute.

**Housing and Scholarship:** 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 Office of Housing Administration, 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 Division of Graduate Affairs 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 late register must pay registration fees plus a \$25.00 late fee before 4:00 p.m. on the 15th class day of the semester. After receiving an add code from the instructor of the course the student wants to add, the student accesses the SDSU WebPortal to officially register. The last day to add or drop classes is 6:00 p.m. on the 15th day of the semester.

**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 Division of Graduate Affairs 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 post-baccalaureate credit will not be granted retroactively.

### Concurrent Post-Baccalaureate Credit

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

Concurrent post-baccalaureate 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 post-baccalaureate 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 post-baccalaureate credit. Concurrent post-baccalaureate credit will not be granted retroactively.

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

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# Regulations of the Division of Graduate Affairs

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

All students beginning graduate study at San Diego State University after August 2008 will be required to follow the procedures and regulations stated in the 2008-09 edition of the *Graduate Bulletin*. A student who was admitted to a graduate degree curriculum at this university prior to that date and who has been enrolled in one or more courses during each consecutive semester since first enrolling as a graduate student, or whose attendance has not been interrupted by more than two consecutive semesters, will be held responsible for the regulations in effect at the time the official master's degree program of study is approved.

## Student Responsibility for Bulletin Information

Students are individually responsible for the information contained in this bulletin. Although the Division of Graduate Affairs 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 certain student records maintained by the campus and the release of such records. The law provides that the campus must give students access to most records directly related to the student, and must also provide opportunity for a hearing to challenge the records if the student claims 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 through the SDSU Office of the Registrar's web site at

<http://arweb.sdsu.edu/es/registrar/privacy.html>.

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 complaints 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 what 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 accessing 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 Employee Relations and Compliance, 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 well as other applicable federal and state laws prohibiting discrimination. 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. Sections 504 and 508 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and various state laws prohibit such discrimination. Students should address inquiries concerning San Diego State University's compliance with all relevant disability laws to the director of Student Disability Services (SDS), Calpulli Center, Room 3101, San Diego State University, CA 92182, or call 619-594-6473 (TDD: 619-594-2929).

#### Sex/Gender

San Diego State University does not discriminate on the basis of sex, gender, or sexual orientation in the educational programs or activities it conducts. Title IX of the Education Amendments of 1972 and certain other federal and state laws prohibit discrimination on these bases, in education programs and activities. Such programs and activities include admission of students and employment. Inquiries concerning the application of these laws to programs and activities can be directed to the director, Office of Employee Relations and Compliance, 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.

### 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 Personal Responsibility and Work Opportunity Reconciliation Act to achieve licensure.

### Numbering of Courses

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

Courses numbered at the 900 level, 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. Undergraduate students may enroll in these courses only if they are officially admitted to a blended or integrated

program where undergraduate and credential coursework is included in the same program. 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** (incomplete authorized), 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 year except for graduate thesis (799A) or dissertation (899). Failure to complete the assigned work within one calendar year except for courses 799A and 899 will result in the course being computed into the grade point average as an "F" (or a "NC" if the course was taken for a credit/no credit grade). Graduate courses for which the "RP" symbol is appropriate are specifically designated in the departmental listings of the *Graduate 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 you were permitted to drop a course after the first 15 class days of the semester because of a verified serious and compelling reason, and you have 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 your permanent record for courses which an official drop has been approved.

Dropping a class is not permitted after 6:00 p.m. on the 15th class day of the semester, except in cases such as accident or serious illness where the cause of dropping the class is due to circumstances clearly beyond your 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 your grade status in the class, and approved by the dean or designee of the college of your major.

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 not take course listed on their program of study for Cr/NC grade unless the course is 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 *Graduate Bulletin*: "Specified sections of this course may be offered for credit/no credit. Refer to the *Class Schedule*."

### **Incomplete Authorized 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 or the Office of the Registrar Web site at <http://www.sdsu.edu/registrar>.

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" is posted to the record at the end of the one year time limit 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" (incomplete authorized) is not counted in the grade point computation until one calendar year has expired, at which time it will be charged as an IC (incomplete charged) grade 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. 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 maintain continuing status (see Leaves of Absence) and 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 by the faculty committee and is submitted to the Division of Graduate Affairs for formal review.

### 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 Division of Graduate Affairs.

### 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 15th 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 15th class day of the semester. After the 15th 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. 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, with programs of study on file, will retain their original bulletin 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 WU 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. Students must earn a grade of C or better in all courses on their program of study. Some programs require grades of B or better in selected courses. A course must be repeated if the minimum grade requirement is not satisfied. The grades will be averaged in computing the grade point average. If a student repeats a course in which a WU has been earned, the original WU 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 WU has been earned may be repeated only once. Repeated courses may not be taken for credit/no credit. **Students who have successfully repeated a "WU" graded course should notify the Division of Graduate Studies if they wish immediate adjustment of their grade point average.**

## Academic Probation and Disqualification

### Academic 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.

### Academic Disqualification

A graduate student whose grade point average falls below 2.85 for 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 all work attempted at San Diego State University.

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 major 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. Students will be notified when they are subject to dismissal from the major. They may appeal the decision to the program or department. If the appeal is denied, the student will be officially removed from the major at the end of the semester. Unless

the student has been reinstated in the major or admitted to another graduate program before the end of the semester, the student will not be allowed to enroll in the following semester.

### 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 Probation and Disqualification

### Administrative Probation

The graduate dean may place a student on administrative 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).

Students who have been disqualified from SDSU will not be allowed to attend regular, or Open University, or classes through the SDSU College of Extended Studies Special Sessions until one year from the date of their disqualification. Students must also reapply for admission to the university and gain acceptance before resuming enrollment in regular SDSU classes after that one year.

### Administrative Disqualification

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

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

## Student Conduct and Grievances

Inappropriate conduct by students or by applicants for admission is subject to discipline on the San Diego State University campus. The Center for Student Rights and Responsibilities 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. Standards for Student Conduct.

San Diego State University is committed to maintaining a safe and healthy living and learning environment for students, faculty, and staff. Each member of the campus community must choose behaviors that contribute toward this end. Student behavior that is not consistent with the Student Conduct Code is addressed through an educational process that is designed to promote safety and good citizenship and, when necessary, impose appropriate consequences.

## Regulations of the Division of Graduate Affairs

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### (a) Student Responsibilities

Students are expected to be good citizens and to engage in responsible behaviors that reflect well upon their university, to be civil to one another and to others in the campus community, and contribute positively to student and university life.

### (b) Unacceptable Student Behaviors

The following behavior is subject to disciplinary sanctions:

- (1) Dishonesty, including:
  - (A) Cheating, plagiarism, or other forms of academic dishonesty that are intended to gain unfair academic advantage.
  - (B) Furnishing false information to a university official, faculty member, or campus office.
  - (C) Forgery, alteration, or misuse of a university document, key, or identification instrument.
  - (D) Misrepresenting oneself to be an authorized agent of the university or one of its auxiliaries.
- (2) Unauthorized entry into, presence in, use of, or misuse of university property.
- (3) Willful, material and substantial disruption or obstruction of a university-related activity, or any on-campus activity.
- (4) Participating in an activity that substantially and materially disrupts the normal operations of the university, or infringes on the rights of members of the university community.
- (5) Willful, material and substantial obstruction of the free flow of pedestrian or other traffic, on or leading to campus property or an off-campus university related activity.
- (6) Disorderly, lewd, indecent, or obscene behavior at a university related activity, or directed toward a member of the university community.
- (7) Conduct that threatens or endangers the health or safety of any person within or related to the university community, including physical abuse, threats, intimidation, harassment, or sexual misconduct.
- (8) Hazing, or conspiracy to haze. Hazing is defined as any method of initiation or pre-initiation into a student organization or student body, whether or not the organization or body is officially recognized by an educational institution, which is likely to cause serious bodily injury to any former, current, or prospective student of any school, community college, college, university, or other educational institution in this state (Penal Code 245.6), and in addition, any act likely to cause physical harm, personal degradation or disgrace resulting in physical or mental harm, to any former, current, or prospective student of any school, community college, college, university, or other educational institution. The term "hazing" does not include customary athletic events or school sanctioned events.

Neither the express or implied consent of a victim of hazing, nor the lack of active participation in a particular hazing incident is a defense. Apathy or acquiescence in the presence of hazing is not a neutral act, and is also a violation of this section.
- (9) Use, possession, manufacture, or distribution of illegal drugs or drug-related paraphernalia, (except as expressly permitted by law and university regulations) or the misuse of legal pharmaceutical drugs.
- (10) Use, possession, manufacture, or distribution of alcoholic beverages (except as expressly permitted by law and university regulations), or public intoxication while on campus or at a university related activity.
- (11) Theft of property or services from the university community, or misappropriation of university resources.
- (12) Unauthorized destruction, or damage to university property or other property in the university community.

(13) Possession or misuse of firearms or guns, replicas, ammunition, explosives, fireworks, knives, other weapons, or dangerous chemicals (without the prior authorization of the campus president) on campus or at a university related activity.

(14) Unauthorized recording, dissemination, or publication of academic presentations (including handwritten notes) for a commercial purpose.

(15) Misuse of computer facilities or resources, including:

- (A) Unauthorized entry into a file, for any purpose.
- (B) Unauthorized transfer of a file.
- (C) Use of another's identification or password.
- (D) Use of computing facilities, campus network, or other resources to interfere with the work of another member of the university community.
- (E) Use of computing facilities and resources to send obscene or intimidating and abusive messages.
- (F) Use of computing facilities and resources to interfere with normal university operations.
- (G) Use of computing facilities and resources in violation of copyright laws.
- (H) Violation of a campus computer use policy.

(16) Violation of any published university policy, rule, regulation or presidential order.

(17) Failure to comply with directions of, or interference with, any university official or any public safety officer while acting in the performance of his/her duties.

(18) Any act chargeable as a violation of a federal, state, or local law that poses a substantial threat to the safety or well-being of members of the university community, to property within the university community or poses a significant threat of disruption or interference with university operations.

(19) Violation of the Student Conduct Procedures, including:

- (A) Falsification, distortion, or misrepresentation of information related to a student discipline matter.
- (B) Disruption or interference with the orderly progress of a student discipline proceeding.
- (C) Initiation of a student discipline proceeding in bad faith.
- (D) Attempting to discourage another from participating in the student discipline matter.
- (E) Attempting to influence the impartiality of any participant in a student discipline matter.
- (F) Verbal or physical harassment or intimidation of any participant in a student discipline matter.
- (G) Failure to comply with the sanction(s) imposed under a student discipline proceeding.

(20) Encouraging, permitting, or assisting another to do any act that could subject him or her to discipline.

### (c) Application of this Code

Sanctions for the conduct listed above can be imposed on applicants, enrolled students, students between academic terms, graduates awaiting degrees, and students who withdraw from school while a disciplinary matter is pending. Conduct that threatens the safety or security of the campus community, or substantially disrupts the functions or operation of the university is within the jurisdiction of this Article regardless of whether it occurs on or off campus. Nothing in this Code may conflict with Education Code section 66301 that prohibits disciplinary action against students based on behavior protected by the First Amendment.

### (d) Procedures for Enforcing this Code

The chancellor shall adopt procedures to ensure students are afforded appropriate notice and an opportunity to be heard before the university imposes any sanction for a violation of the Student Conduct 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 insure 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; the authority of the campus president in such matters; conduct related determinations on financial aid eligibility and termination; alternative kinds of proceedings, including proceedings conducted by a hearing officer; time limitations; notice; conduct of hearings, including provisions governing evidence, a record, and review; and such other related matters as may be appropriate. The chancellor shall report to the board actions taken under this section.

**Student Grievances**

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

**Plagiarism**

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

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

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

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

**Integrity in Research and Scholarship**

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 Integrity in Research and Scholarship** 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

Official transcripts can be ordered online in your SDSU WebPortal by accessing <http://www.sdsu.edu/portal> and selecting "Official Transcript." If all your coursework was completed prior to 1987 or if your transcript requires special handling (e.g. via FedEx, Priority Mail), you will need to order official transcripts by completing an Official Transcript Request form and submitting it to the University Cashiers Office. A fee is charged for all transcripts and must be paid in advance. An official transcript is usually sent within three to five business days after the request is processed by the Cashiers Office, unless a hold has been indicated. 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 transferable course credit is 9 units including courses taken through San Diego State University College of Extended Studies. Exceptions are the Master of Business Administration degree, Master in Biomedical Quality Systems degree, Master of Science in Nursing degree which permits 12 units; the Master in Regulatory Affairs degree which permits 19 units; the Master of Fine Arts in Creative Writing degree which permits 18 units; the Master of Science degree in Counseling which permits 24 units; and the Master of Fine Arts degree in Art, the Master of Fine Arts degree in Theatre Arts, the Master of Science degree in Rehabilitation Counseling, and the Master of Social Work degree which permit 30 units. All transfer credit earned in other colleges and universities including foreign universities and those earned through the San Diego State University College of Extended Studies must be approved by the graduate adviser and graduate dean. Credit earned by correspondence or by examination is not acceptable as satisfying advanced degree requirements.

### Open University

Students who have been admitted to the university may **NOT** enroll in on-campus courses through Open University.

Students who have not been admitted to the university may enroll in on-campus courses through Open University during the regular semester on a space available basis with approval of the course instructor and the department chair. Courses taken through Open University prior to admission to the university may be transferred to meet graduate degree requirements with the approval of the graduate adviser and the graduate dean and are normally limited to nine units depending on the degree objective (see Transfer Credit).

### Special Sessions

Special session degree programs are offered through the College of Extended Studies for external degree students. A matriculated graduate student who is not in a special session degree program may only take courses through the special session program if the course is not being offered through the regular session, if the student **must** take the course as part of their program of study, and if the course will not be offered again prior to the student's planned graduation date. In these cases if the student is taking **regular session** courses, he or she **will** have to pay **special session** fees and **regular session** fees.

### College of Extended Studies

Non credit courses offered through the College of Extended Studies will appear on the San Diego State University transcript but are not transferable for graduate credit. Graduate students who enroll in these courses normally do so for personal enrichment only.

### Study List Limits in the Division of Graduate Studies

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 Thesis Extension (799B) or Comprehensive Examination Extension (799C) is considered half time for master's degree candidates. Enrollment in Doctoral Research (897), Doctoral Dissertation (899), or Clinical Internship (Psychology 894) is 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 14 disciplinary areas, the degree Doctor of Education (Ed.D.) in three, an educational specialist degree (Ed.S.) in school psychology, 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#jdp>
- **Clinical Psychology**  
<http://www.psychology.sdsu.edu/doctoral>
- **Engineering Sciences/Applied Mechanics**  
<http://attila.sdsu.edu/jdp/>
- **Language and Communicative Disorders**  
<http://chhs.sdsu.edu/slhs/phdmain.php>
- **Mathematics and Science Education**  
<http://public.sdsu.edu/CRMSE/>
- **Public Health Epidemiology/Health Behavioral Science/Global Health**  
<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/ecology/prog\\_phd.php](http://www.bio.sdsu.edu/ecology/prog_phd.php)
- **Computational Science/Statistics** (San Diego State University and Claremont Graduate University),  
[http://www.csrc.sdsu.edu/csrc/education/graduate\\_programs/phd/overview.php](http://www.csrc.sdsu.edu/csrc/education/graduate_programs/phd/overview.php)
- **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://geography.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.)** in educational leadership is offered by San Diego State University, <http://eddleaders.sdsu.edu>. The specific requirements for this program will be found in Part Three of this bulletin under Education.

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

An educational specialist degree in school psychology (Ed.S.) is offered by San Diego State University, <http://edweb.sdsu.edu/CSP/>. 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 *Graduate Bulletin* 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, University of San Diego, or California State University, San Marcos, and to San Diego State University. Fees and regulations governing the doctoral programs are found in the *Graduate Bulletin of the* of San Diego State University and in the Graduate Studies Bulletins of each of the cooperating campuses. Formal admission to the universities with appropriate graduate standing occurs when the student is formally accepted by each of the 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 two campuses. Students 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 Research 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 are enrolled. For general information, application procedures, guidance on ethical practices, and submission deadlines, visit <http://gra.sdsu.edu/research/irb>. You may also e-mail [irb@mail.sdsu.edu](mailto:irb@mail.sdsu.edu) or call 619-594-6622.

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 Affairs at <http://gra.sdsu.edu/research/iacuc>. The office is located in Student Services, Room 1410.

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 in educational leadership will be awarded by the trustees of The California State University. 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 Division of Graduate Affairs. 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 Division of Graduate Affairs 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 Division of Graduate Affairs.

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 *Graduate Bulletin* in effect at the time of readmission.

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

It is the student's responsibility to complete the specific courses listed on the official program of study with a grade of C or better. 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. 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 have maintained the required grade point averages with no grade of less than 2.0 (C) in a program course and completed all the undergraduate deficiencies and the special requirements of the department or school concerned. The Division of Graduate Affairs will send the students written notification of advancement to candidacy.

A program of study must be on file at least one semester prior to graduation. A student may not enroll in 799A or take a Plan B comprehensive examination until advanced to candidacy.

## Unit Requirements

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

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.

When directed by the Office of Financial Aid and Scholarships, some students may be required to obtain approval when additional coursework, not on the official master's degree program, is required to prepare for a thesis or a project. The additional courses must be recommended by the graduate adviser and approved by the Division of Graduate Affairs in order for the student to receive financial aid.

### 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 38 units for 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-eight 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.**

## Basic Requirements for Master's Degrees

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### 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 School of Art, Design, and Art History, 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 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. **Not 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 School of Theatre, Television and Film, 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

Sixty units of 500-, 600- and 700-numbered courses specified by the School of Social Work 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.

## 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.
2. 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.

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

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

## 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 are enrolled. IRB review application materials and guidance on the SDSU campus may be obtained via the Internet at <http://gra.sdsu.edu/research/irb> or through the Division of Research Affairs in Student Services, Room 1410.

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 Affairs at <http://gra.sdsu.edu/research/iacuc>. The office is located in Student Services, Room 1410.

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 Division of Graduate Affairs. 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 Division of Graduate Affairs and have an officially approved thesis or project committee form on file in the Division of Graduate Affairs. The student must obtain clearance for registration in Thesis from the Division of Graduate Affairs. 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 *SDSU Dissertation and Thesis 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 Division of Graduate Affairs 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 Division of Graduate Affairs. Determination of whether the research will involve human or animal subjects must be made at this point (see Subject (Thesis/Dissertation) Research Involving Human Subjects or Animal Subjects in this section of bulletin). 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 Division of Graduate Affairs. If the thesis will be written in a foreign language, such notification must be made on the thesis committee form (see next section). After the committee is approved, the student may enroll in Course 799A, Thesis, through the Division of Graduate Affairs. 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 *SDSU Dissertation and Thesis 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, for a foreign language degree, 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.

To obtain approval by the graduate dean: (1) the "thesis in a foreign language" box must be checked on the appointment of thesis committee form, and (2) written verification by the departmental graduate adviser that provisions 2 and 3 above have been met must be attached to the appointment of thesis committee form when it is submitted to the Division of Graduate Affairs.

### 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 *Dissertation and Thesis 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 Division of Graduate Affairs 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 dissertation and 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.

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 dissertation and thesis review service. A "credit" grade will not be recorded or the degree awarded unless the thesis has been approved by the dissertation and 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.

### 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 for Graduation (along with the graduation services fee of \$55) must be filed with the Division of Graduate Affairs via the Cashiers Office. The university begins accepting applications for graduation the semester or term prior to anticipated graduation. However, the deadline occurs during the first few weeks of 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.

Students who do not graduate in the semester or term for which they have applied must reapply for the subsequent semester or term in which they expect to be graduated. The graduation services fee of \$55 must accompany each subsequent Application for Graduation.

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



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# Curricula and Courses

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.

## Absence from Class

### 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.

### Religious Observances

By the end of the second week of classes, students should notify the instructors of affected courses of planned absences for religious observances. Instructors shall reasonably accommodate students who notify them in advance of planned absences for religious observances.

## Schedule Adjustment Policy

All schedule adjustments (formerly called Change of Program) MUST BE COMPLETED BY THE END OF THE 15th CLASS DAY OF THE SEMESTER BY 6:00 P.M. 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.

## 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 Division of Graduate Affairs. 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.

## 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. Enrollment in 799C is not necessary if a student is enrolled in other coursework during the semester they take the comprehensive examination. Enrollment in 799C is limited to two semesters.

## 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.



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# Anthropology

In the College of Arts and Letters

**OFFICE: Arts and Letters 448**

**TELEPHONE: 619-594-5527 / FAX: 619-594-1150**

**E-MAIL: [anthro@mail.sdsu.edu](mailto:anthro@mail.sdsu.edu)**

**<http://www.rohan.sdsu.edu/~anthro/>**

## Faculty

Seth W. Mallios, Ph.D., Professor of Anthropology,  
Chair of Department

Joseph W. Ball, Ph.D., Professor of Anthropology

Lynn H. Gamble, Ph.D., Professor of Anthropology

Ramona L. Pérez, Ph.D., Associate Professor of Anthropology  
(Graduate Adviser)

Elisa J. Sobo, Ph.D., Associate Professor of Anthropology

Frederick J. Conway, Ph.D., Assistant Professor of Anthropology

Matthew T. Lauer, Ph.D., Assistant Professor of Anthropology

Arion T. Mayes, Ph.D., Assistant Professor of Anthropology

Erin P. Riley, Ph.D., Assistant Professor of Anthropology

## Associateships

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

## General Information

The Department of Anthropology 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> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Anthropology.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions

Enrollment Services

San Diego State University

San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Department of Anthropology

The following materials should be submitted by October 1 for admission for the spring semester and March 1 for the fall semester to:

Department of Anthropology

(Attention: Graduate Adviser)

San Diego State University

5500 Campanile Drive

San Diego, CA 92182-4443

- (1) Three letters of recommendation (in sealed and signed envelopes) from persons in a position to judge academic ability;

- (2) One typewritten example of academic writing (research term paper, etc.).

## 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 a thesis adviser, formed a thesis committee, and written a thesis proposal that has been approved by their thesis committee. The committee can be formed after (1) successful completion of 12 units from the core seminars, depending on area of specialization (Anthropology 601, 602, 603, 604, or 605) with a minimum grade point average of 3.0 and no less than a grade of B in each of the 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 completed a sequence of at least one lower division and one upper division course (with a grade point average of 2.5 or better) in either a foreign language or statistics. The statistics requirement may be satisfied by taking one of the following sequences in statistics: Biology 215; Sociology 201 and 406 or 407; or Statistics 250 and 350A or equivalent.

**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 33 units of which at least 21 units must be in 600- and 700-numbered courses in anthropology, to include:

1. Anthropology 601, 602, 603, 604 (with minimum grade point average of 3.0 and no less than a grade of B in each of these core seminars). Only classified students may enroll in these courses);

2. Anthropology 580;
3. One of the following methods courses: Anthropology 520, 531, 560, 561 or 505;
4. Anthropology 797, Research (to be taken after approval of thesis proposal by full committee);
5. Anthropology 799A, Thesis.

No more than three units of Anthropology 798, Special Study, may be used toward satisfaction of the degree as listed in the program of study.

All graduate students must present their thesis research as an oral examination on the general field of the thesis with all committee members present as a requirement for the degree. Only Plan A, requiring the thesis, is permitted for the Master of Arts degree in anthropology.



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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 / **FAX:** 619-594-1217  
**E-MAIL:** [artinfo@mail.sdsu.edu](mailto:artinfo@mail.sdsu.edu)  
**http://www.sdsu.edu/art**

## Faculty

Arthur L. Ollman, M.F.A., Professor of Art, Design, and Art History,  
Director of School  
Richard J. Baker, M.F.A., Professor of Art, Design, and Art History,  
Emeritus  
Jo-Anne Berelowitz, Ph.D., Professor of Art, Design,  
and Art History (Graduate Adviser, Art History)  
Richard A. Burkett, 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  
Helen Z. Shirk, M.F.A., Professor of Art, Design,  
and Art History, Emeritus  
Susan C. Merritt, M.A., Professor of Art, Design,  
and Art History  
Kerry A. Nelson, M.S., Professor of Art, Design,  
and Art History  
Ida K. Rigby, Ph.D., Professor of Art, Design, and Art History, Emeritus  
Gail C. Roberts-Fields, M.A., Professor of Art, Design,  
and Art History  
Tina Marie Yapelli, M.A., Professor of Art, Design,  
and Art History  
Hiroko Johnson, Ph.D., Associate Professor of Art, Design,  
and Art History  
Richard C. Keely, M.F.A., Associate Professor of Art, Design,  
and Art History (Graduate Adviser, Studio Arts)  
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  
Sandra Lee Sherman, M.F.A., Associate Professor of Art, Design,  
and Art History  
Mark J. Siprut, M.F.A., Associate Professor of Art, Design,  
and Art History  
Kim Stringfellow, M.F.A., Associate Professor of Art, Design,  
and Art History  
Nancy Deffebach, Ph.D., Assistant Professor of Art, Design,  
and Art History  
Saied Farisi, M.F.A., Assistant Professor of Art, Design,  
and Art History  
Matthew G. Hebert, 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 graduate adviser. Tuition waivers and scholarships 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.

## Admission to Graduate Study

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee by February 1.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Art, Design, and Art History by the February 1 deadline.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

**Master of Fine Arts Degree in Art  
Master of Arts (Studio Arts) Degree in Art**

The following materials should be mailed or delivered by February 1 for admission for the fall semester to:

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

- (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) 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;
- (3) Artist statement which describes the nature or content of the work shown in the portfolio;
- (4) Slides, photos or digital images of your work. All slides must be accompanied by a corresponding slide description sheet. All digital images must be accompanied by a printed thumbnail index. Digital images should not exceed 1024 x 768 pixels, and should be presented either as a collection of JPEG files in a folder along with a caption list, or as captioned images contained within a single PDF or with PowerPoint. Printed digital image samples are encouraged, but must be accompanied by disc in the above stated formats;
- (5) 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;
- (6) Any other materials required specifically in the instructions by your chosen discipline;
- (7) Return envelope with sufficient postage for the return of your portfolio.

**Master of Arts (Art History) Degree in Art**

The following materials should be submitted by February 1 for admission for the fall semester to:

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

- (1) School of Art, Design, and Art History application form. Refer to <http://www.sdsu.edu/art> to download application form and instructions;
- (2) 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;
- (3) 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;
- (4) 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.

**Master of Fine Arts Degree in Art****Admission to the Degree Curriculum**

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.

**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 the Degree Curriculum

#### 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.

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. 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.

#### Art History

Art history applications, obtainable from the School of Art, Design, and Art History, are due on February 1 for the fall semester. Transcripts of all undergraduate or postbaccalaureate work must be sent to Enrollment Services.

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 Student Testing, Assessment and Research Office 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 15 units from the 600- and 700-numbered courses to include Art 799A, selected in consultation with the art history adviser. Students may select up to 15 units of 500-level courses in art, 12 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 578 and 593 if these courses are 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 maintained in the library. Color slides or digital images of thesis exhibitions must be provided by the candidate and are retained in the School of Art, Design, and Art History's slide library. One copy of art history theses must be given to the School of Art, Design, and Art History.

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# Asian Studies

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

**OFFICE: Arts and Letters 473**  
**TELEPHONE: 619-594-0931 / FAX: 619-594-0257**  
**E-MAIL: [mcastane@mail.sdsu.edu](mailto:mcastane@mail.sdsu.edu)**  
**<http://www.rohan.sdsu.edu/~aps1>**

**Interim Chair of Department: Sherry B. Little, Ph.D.**

## General Information

No new students are being admitted to this program. For further information, contact the Department of Asia Pacific Studies.

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 Asian/Middle Eastern 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> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Asia Pacific Studies.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

(1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

(2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

(3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Department of Asia Pacific Studies

The following materials should be mailed or delivered to:

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

(1) Letters of reference (minimum 3);

(2) Personal statement;

(3) Writing sample of recent academic work.

## 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 adviser of the Department of Asia Pacific Studies.

## 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 799A. The remaining 27 units to be selected, with departmental approval, from the list of approved courses in Part Three of this bulletin. In addition, any other Asian-content courses may be applied with approval of the graduate adviser.

The total program may not include more than 15 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.

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# Astronomy

In the College of Sciences

**OFFICE: Physics / Astronomy 210**  
**TELEPHONE: 619-594-6182 / FAX: 619-594-1413**  
**E-MAIL: [astro@sciences.sdsu.edu](mailto:astro@sciences.sdsu.edu)**  
**<http://mintaka.sdsu.edu>**

## Faculty

Allen W. Shafter, Ph.D., Professor of Astronomy, Chair of Department  
Paul B. Etzel, Ph.D., Professor of Astronomy, Director of  
Mount Laguna Observatory  
Jerome A. Orosz, Ph.D., Associate Professor of Astronomy  
Eric L. Sandquist, Ph.D., Associate Professor of Astronomy  
William F. Welsh, Ph.D., Associate Professor of Astronomy  
(Graduate Adviser)  
Douglas C. Leonard, Ph.D., Assistant Professor of Astronomy  
Robert W. Leach, Ph.D., Resident Astronomer

## 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 (two) and 24 inches. One 40-inch telescope is operated jointly with the University of Illinois and the other with the University of Kansas. 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. Departmental PCs and several UNIX workstations with various storage units and laser printers are connected to the Internet. The department has access to more extensive campus computing facilities and to the San Diego Super-computer 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, charts, and selected reference texts.

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 thesis 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.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Astronomy.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Department of Astronomy

The following materials should be mailed or delivered to:

Department of Astronomy  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1221

- (1) Letters of reference (two or three);
- (2) Personal statement;
- (3) Application for teaching associate position or graduate assistantship (if desired).



**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**

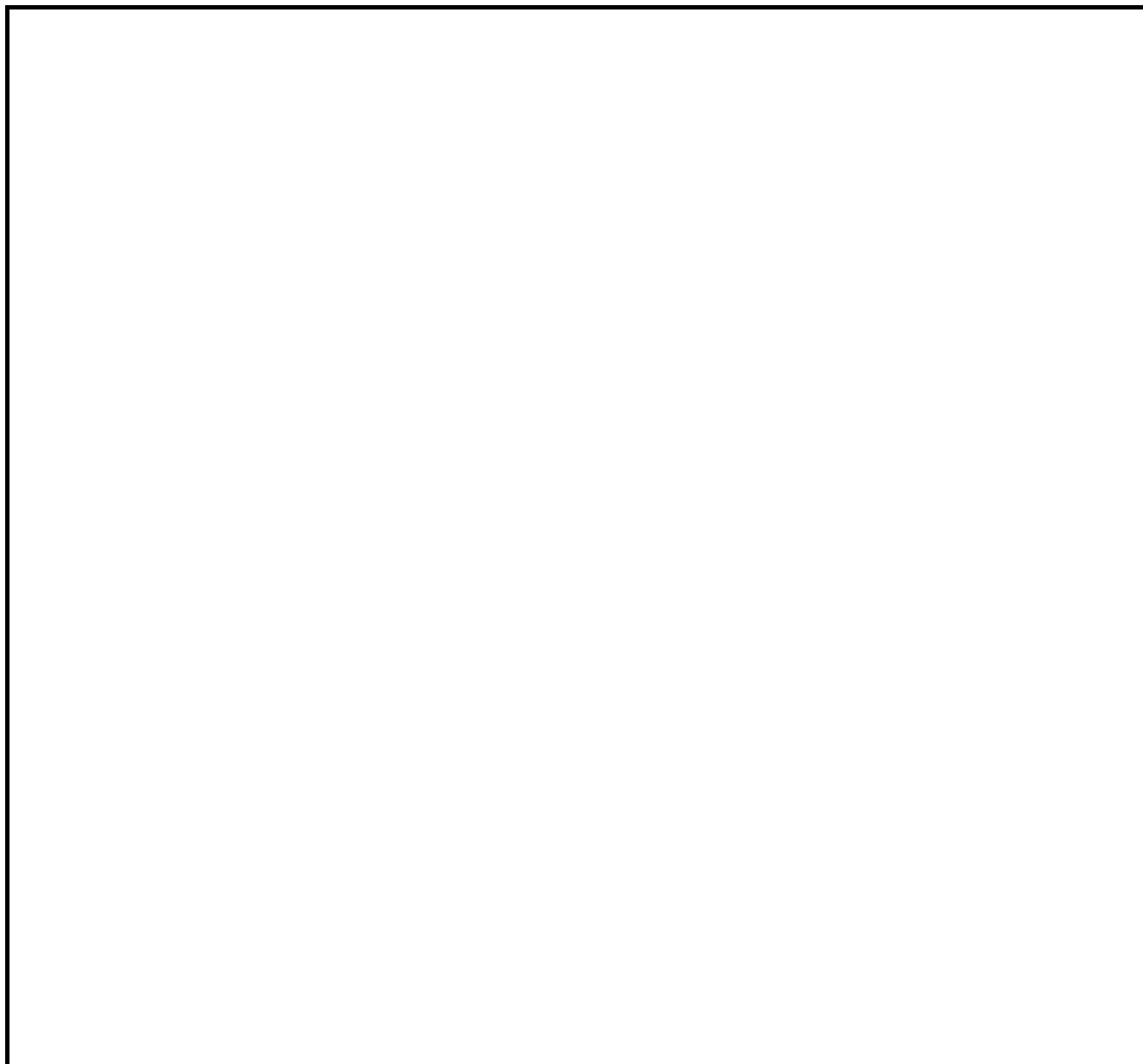
**(Major Code: 19111)**

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 graduate adviser.
3. Plan A: Astronomy 799A, Thesis (3) Cr/NC/RP, and pass a final oral examination on the thesis.  

OR

Plan B: Astronomy 790A, Research Paper (3) Cr/NC/RP, and pass a final oral examination on the research paper.
4. Facility with a scientific computing language is required.



# Audiology

In the School of Speech, Language, and Hearing Sciences  
In the College of Health and Human Services

**OFFICE: Speech, Language, and Hearing 118**  
**TELEPHONE: 619-594-7746 / FAX: 619-594-7109**  
**<http://chhs.sdsu.edu/slhs/audmain.php>**

**Director of School: Beverly B. Wulfbeck, 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, or 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 Science and Director of Program (Graduate Adviser)  
Laura Dreisbach Hawe, Ph.D., Associate Professor of Speech, Language, and Hearing Sciences  
Carol L. Mackersie, Ph.D., Associate Professor of Speech, Language, and Hearing Sciences  
Peter Torre, III, Ph.D., Assistant Professor of Speech, Language, and Hearing Sciences  
Jacque J. Georgeson, Au.D., Audiology Clinic Director

### University of California, San Diego:

Director: Erika M. Zettner, Ph.D.  
Faculty: Benitez, Bosch, Harris, Hicks, Keithley, Lin, Mattson, Mullen, Nguyen, Ryan, Viirre

## 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 joint doctoral program in audiology is accredited by the American Speech-Language-Hearing Association (ASHA). 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) submission of scores on the GRE with satisfactory performance on both quantitative and verbal portions of the examination; (b) prerequisite completion of

at least one course in statistics, one course in biological science, one course in physical science, one course in biological or physical science, 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. 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.

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.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee. Indicate "Audiology (AuD)" as your Major/Program Objective. Indicate "Doctorate" as the Degree Objective.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Speech, Language, and Hearing Sciences.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
  - Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.
- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
  - (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### School of Speech, Language, and Hearing Sciences

The following materials should be mailed or delivered (must be received by January 20) to:

School of Speech, Language, and Hearing Sciences  
Au.D. Joint Doctoral Program  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1518

- (1) Complete the School of Speech, Language, and Hearing Sciences application online. Submit it online and also print it and include it with your supplemental materials;
- (2) Applicant essay: See Guidelines for the Applicant Essay;
- (3) Three letters of recommendation. Note: There is no recommendation form. Recommendation letters are to be sent with the application packet in sealed envelopes signed across the sealed flap by the person writing the letter.
- (4) Include your resume of experiences applicable to this field, and copies of relevant abstracts/papers published by you (optional).

### 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 after years 1 through 3. 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 14 elective courses, with a minimum of four to be taken at each campus. The student's faculty adviser must approve all courses.

A student who earns less than a 3.0 grade point average in academic coursework in any given term will be placed on academic probation for the next term. If, at the end of the probationary term, the

student fails to achieve a 3.0 grade point average in academic coursework, the student will be subject to disqualification from the program. Students who earn less than a 3.0 grade point average in the spring term of the third year will be required to complete an independent study course concurrently with their fourth year externship.

**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 Otology Clinics, and in community field sites. Clinic courses may be repeated as needed and require adviser approval prior to enrollment. Students must earn an overall grade of B or higher to pass clinic courses. Students are assessed across the following clinical skill categories: 1) professionalism; 2) patient interaction; 3) evaluation; 4) treatment; 5) documentation. If the grade for clinic courses in any term through the winter of year two is less than a B, the student is placed on probation and will develop and complete a remediation plan in consultation with the clinic supervisor and audiology clinic director. The student will have an additional term to bring the grade up to at least a B. If a grade of less than a B is obtained in two consecutive terms in years one and/or two, the student will be subject to termination from the Au.D. program for not possessing adequate clinical skills to progress. Students are required to have a B or higher in all five clinical skill categories by the end of the spring term of year two to continue in the program. Subsequent to spring term of year two, if a grade of less than a B is earned in any clinic course, the student will be subject to termination from the program or the fourth year externship will be delayed. Prior to the fourth year externship, each student will complete approximately 500 hours of clinic experience. A minimum of 2000 clinical hours is required by the end of the program.

**Preceptorship in Otology.** 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 one semester participating in research being done by program faculty. 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 cumulative grade point average for core courses during the first year and have appropriate clinical skills. 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 Examination. This examination will be a written and practical examination to be taken at the end of the summer 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 for core and elective courses, and have appropriate clinical skills. 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 and practical examination to be taken at the end of the spring quarter. 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 written Comprehensive Examination.

**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.

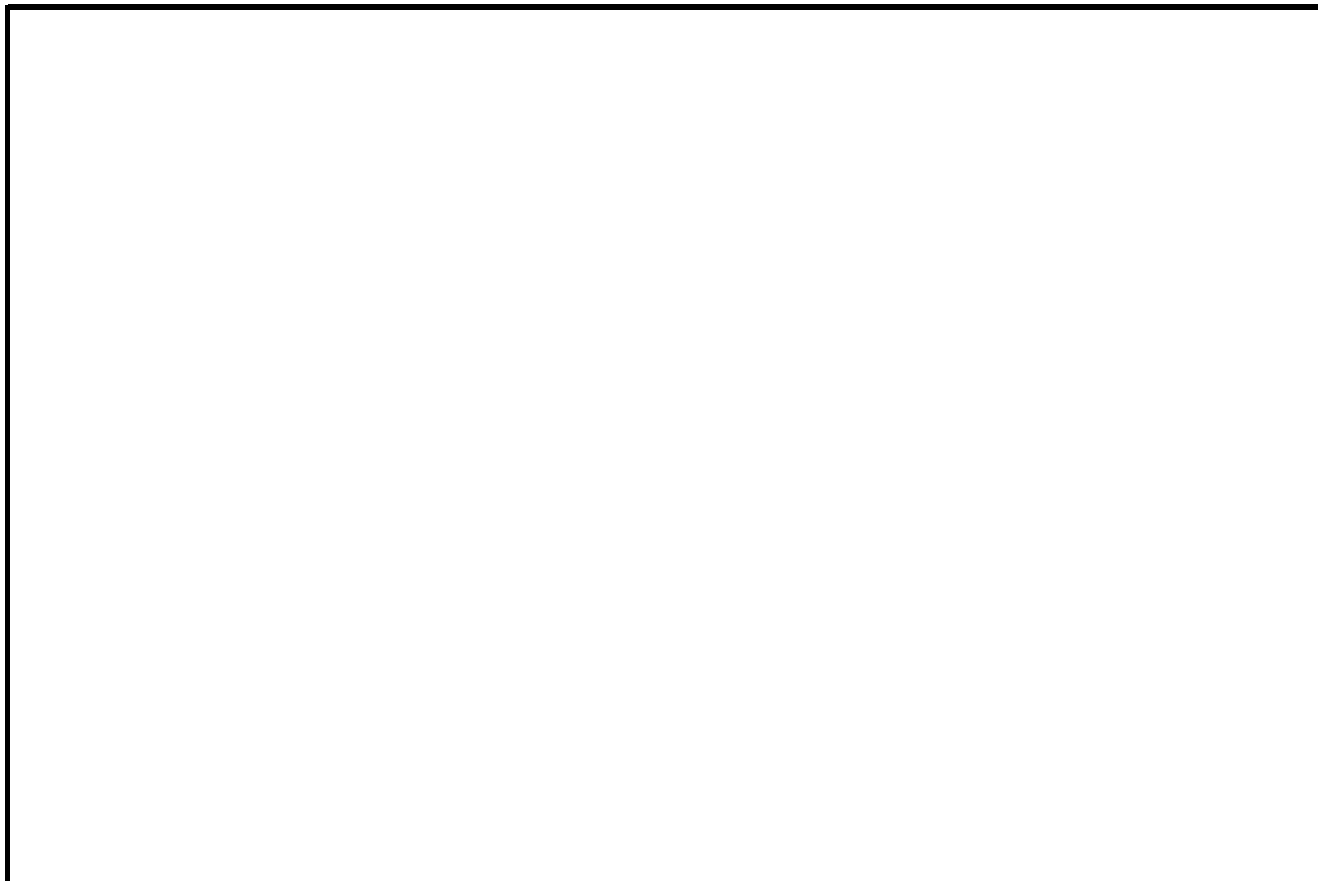
**Doctoral Project.** Each student will complete an innovative doctoral project. The doctoral project can take the form of a number of different options, e.g., a research-based investigation, survey, meta-analysis, development of a clinical protocol based on published

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 third committee member approved by the Doctoral Project chair. 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.



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# Bioinformatics and Medical Informatics

In the College of Sciences

**OFFICE: Geology/Mathematics/Computer Science 413**

**TELEPHONE: 619-594-6191**

**E-MAIL: [faramarz@sciences.sdsu.edu](mailto:faramarz@sciences.sdsu.edu)**

## Associated Faculty

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

William E. Stumph, Ph.D., Professor Chemistry and Biochemistry

B. Mikael Bergdahl, Ph.D., Associate Professor of Chemistry and Biochemistry

Sunil Kumar, Ph.D., Associate Professor of Electrical and Computer Engineering

Chii-Dean Lin, Ph.D., Associate Professor of Statistics

Faramarz Valafar, Ph.D., Associate Professor of Computer Science

Robert A. Edwards, Ph.D., Assistant Professor of Computer Science

Scott Kelley, Ph.D., Assistant Professor of Biology

Elizabeth R. Waters, Ph.D., Assistant Professor of Biology

## General Information

Bioinformatics and medical informatics (BIOMI) are multidisciplinary fields at the intersection of computing and informatics, mathematics and statistics, biology, chemistry, and engineering.

The explosion in genomic information and in the elucidation of pathways of various types has created an unprecedented, but largely unmet, need for professionals with a working knowledge of the biological sciences and computing/statistical methods. The shortage, which is especially severe in the biotechnology and pharmaceutical industries, has been documented by various studies and discussed in the press. We can also observe a comparable demand in hospital and other clinical settings as the impact of new technologies spreads into clinical research and medical practice.

Research and development (R&D) in BIOMI can be categorized into one of three branches. The first branch is the algorithm development branch in which R&D specialists use mathematical and engineering techniques to develop new, more efficient, and/or more accurate methods to mine biological or clinical data. The second branch falls within the software engineering paradigm and primarily focuses on R&D in human-computer interface. The third branch seeks to find answers to specific biological or medical questions including drug development or working to uncover the underlying mechanisms involved in specific biological systems or specific diseases. In the first year of the program, students in consultation with their graduate adviser will take basic courses within two of the following four disciplines: biology, chemistry, computer science, and mathematics/statistics.

For specialization in the algorithm development branch, students can choose courses and projects in areas such as statistics, data mining, pattern recognition, artificial intelligence, search strategies, network architecture, digital image processing and advance imaging, modeling, decisions systems design, and analytical studies in various biological and clinical specializations. For specialization in the human-computer interface branch, students can choose courses and projects in areas such as principals of software design, human interface design, network architecture, usability studies, database design and management, computer graphics and animation, CAD, and programming languages. For the third specialization students take a combination of courses in the areas listed above plus some specialized courses such as computer aided drug design.

The change towards quantitative analysis in life and clinical sciences has been so rapid that universities have been caught unprepared: few offer suitable courses, and virtually none offer a well integrated curriculum that meets the needs that are sure to grow and evolve as life sciences become increasingly conceptual and quantitative.

San Diego State University's BIOMI graduate program offers two related but separable programs. The first is a professional science master concentration preparing students for immediate productivity in industrial or clinical settings. The second is a classical master of science preparing students for academic setting or continuation in a Ph.D. program.

## 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 the Graduate Bulletin, a student must satisfy the following requirements before being considered for recommendation to enter the masters program.

(1) Meet the requirements deemed equivalent to a baccalaureate degree in biology, chemistry, computer science, mathematics, statistics, or a field in engineering.

(2) Meet BIOMI program's expectations on the GRE General Test.

(3) Be considered as capable of graduate work in bioinformatics or medical informatics by at least two letters of reference submitted to the BIOMI program director.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

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. Conditions may include satisfactory passing of certain undergraduate courses. These courses will be in addition to the minimum of 33-38 units required for the program.

### Graduate Admissions

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Bioinformatics and Medical Informatics program.

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

(1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

(2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

(3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

**Master of Science Degree in Bioinformatics and Medical Informatics**

The following materials should be mailed or delivered to:

Bioinformatics and Medical Informatics  
(BIOMI) Graduate Program  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182

- (1) Two letters of recommendation (in sealed and signed envelopes) from persons in a position to judge academic ability.
- (2) Personal statement of motivating interest for the program; also briefly describe research interests and educational and professional goals.

**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: 07994)**

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 study totaling 38 units for the concentration in professional science master and 33 units for the master of science as described below:

1. Complete 12 units of required core courses.
 

BIOL 510	Molecular Evolution (3)
BIOL 568	Bioinformatics (3)
CHEM 560	General Biochemistry (3)
CS 600	Methods in Bioinformatics, Medical Informatics, and Cheminformatics (3)
2. Complimentary: Nine units in a field complimentary to the student's background with approval of the graduate coordinator selected from the following courses.
 

CHEM 567	Biochemistry Laboratory II (3)
CS 505	Parallel Computing (3)
CS 514	Database Theory and Implementation (3)

- |           |  |
|-----------|--|
| CS 520    | Advanced Programming Languages (3)                         |
| CS 535    | Object-Oriented Programming and Design (3)                 |
| CS 689    | Scientific Visualization (3)                               |
| STAT 550  | Applied Probability (3)                                    |
| STAT 551A | Probability and Mathematical Statistics (3)                |
| STAT 551B | Probability and Mathematical Statistics (3)<br>Devices (3) |

3. Electives: Six units of approved 500-, 600, or 700-level electives in disciplines related to the student's specialization with approval of the graduate coordinator.
4. Six units of research including Thesis:
 

BIOMI 797	Research (3) Cr/NC/RP
BIOMI 799A	Thesis or Project 799 (3) Cr/NC/RP

**Professional Science Master Concentration**

1. Complete 12 units of required core courses.
 

BIOL 510	Molecular Evolution (3)
BIOL 568	Bioinformatics (3)
CHEM 560	General Biochemistry (3)
CS 600	Methods in Bioinformatics, Medical Informatics, and Cheminformatics (3)
2. Complimentary: Twelve units in a field complimentary to the student's background with approval of the graduate coordinator selected from the following courses.
 

CHEM 567	Biochemistry Laboratory II (3)
CS 505	Parallel Computing (3)
CS 514	Database Theory and Implementation (3)
CS 520	Advanced Programming Languages (3)
CS 535	Object-Oriented Programming and Design (3)
CS 689	Scientific Visualization (3)
STAT 550	Applied Probability (3)
STAT 551A	Probability and Mathematical Statistics (3)
STAT 551B	Probability and Mathematical Statistics (3) Devices (3)
3. Electives: Nine units of approved 500-, 600, or 700-level electives in disciplines related to the student's specialization with approval of the graduate coordinator.
4. Six units of research including Thesis:
 

BIOMI 797	Research (3) Cr/NC/RP
BIOMI 799A	Thesis or Project 799 (3) Cr/NC/RP

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# Biology

In the College of Sciences

**OFFICE: Life Sciences 104**

**TELEPHONE: 619-594-6767 / FAX: 619-594-5676**

**<http://www.bio.sdsu.edu>**

## Faculty

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

J. David Archibald, Ph.D., Professor of Biology,  
(Graduate Coordinator, Biology)

Sanford I. Bernstein, Ph.D., Professor of Biology  
(Graduate Adviser, Biology Ph.D. program)

Annalisa Berta, Ph.D., Professor of Biology

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

Michael J. Buono, Ph.D., Professor of Biology

Janet Franklin, Ph.D., Professor of Biology,  
Associate Chair of Department

Christopher C. Glembotski, Ph.D., Professor of Biology and  
Associate Dean of the Division of Graduate Affairs

Robert A. Gottlieb, M.D., Professor of Biology

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

Stanley R. Maloy, Ph.D., Professor of Biology and  
Dean of the College of Sciences

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)

Todd W. Anderson, Ph.D., Associate Professor of Biology  
(Graduate Adviser, Ecology)

Andrew J. Bohonak, Ph.D., Associate Professor of Biology

Kevin Burns, Ph.D., Associate Professor of Biology  
(Graduate Adviser, Evolutionary Biology)

Douglas H. Deutschman, Ph.D., Associate Professor of Biology

Marshal C. Hedin, Ph.D., Associate Professor of Biology

Brian T. Hentschel, Ph.D., Associate Professor of Biology

Kevin A. Hovel, Ph.D., Associate Professor of Biology

David Lipson, Ph.D., Associate Professor of Biology

Tod W. Reeder, Ph.D., Associate Professor of Biology

Forest Rohwer, Ph.D., Associate Professor of Biology

Kathy S. Williams, Ph.D., Associate Professor of Biology

Robert W. Zeller, Ph.D., Associate Professor of Biology

César Arenas-Mena, Ph.D., Assistant Professor of Biology

Rulon W. Clark, Ph.D., Assistant Professor of Biology

Kelly Doran, Ph.D., Assistant Professor of Biology

Matthew S. Edwards, Ph.D., Assistant Professor of Biology

Ralph Feuer, Ph.D., Assistant Professor of Biology

Scott Kelley, Ph.D., Assistant Professor of Biology

Chun-Ta Lai, Ph.D., Assistant Professor of Biology

Rebecca Lewison, Ph.D., Assistant Professor of Biology

Elizabeth R. Waters, Ph.D., Assistant Professor of Biology

Roland Wolkowicz, Ph.D., Assistant Professor of Biology

## Associateships and Assistantships

Graduate teaching associateships and graduate assistantships in biology are available to a limited number of qualified students. Application 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.

Modern life science buildings provide 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 Chihuahua Valley, Fortuna Mountain, and Temecula (Riverside County).

## Admission to Master's or Doctoral Study

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Biology.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Master of Arts Degree in Biology

#### Master of Science Degree in Biology

#### Master of Science Degree in Microbiology

The following materials should be mailed or delivered to:

Department of Biology  
Graduate Coordinator  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4614



- (1) Biology department application;
- (2) Application for teaching associateship position or graduate assistantship (optional);
- (3) At least two letters of recommendation in sealed and signed envelopes (optional form available online or may be obtained from department). Forms are available at

<http://www.bio.sdsu.edu/gradprog.html>.

#### **Ph.D. Degree in Biology (Cell and Molecular)**

The following materials should be mailed or delivered to:

Biology Joint Doctoral Program Coordinator  
Department of Biology  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4614

- (1) Statement of professional goals;
- (2) Resume or curriculum vitae;
- (3) 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);
- (4) Three letters of recommendation in sealed and signed envelopes (form available online or may be obtained from the department).

#### **Ph.D. Degree in Ecology**

The following materials should be mailed or delivered to:

Ecology Joint Doctoral Program Coordinator  
Department of Biology  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4614

- (1) Statement of professional goals;
- (2) Resume or curriculum vitae;
- (3) Three letters of recommendation in sealed and signed envelopes (form available online or may be obtained from the department).

Application for admission must be made simultaneously to San Diego State University and the University of California, Davis.

## **Section I. Master's Degree Programs**

The Master of Science degrees in biology and microbiology are acceptable as preparation for more advanced degree programs. Studies for degrees in biology must be completed in one of the research programs listed below. The Master of Arts degree in biology has a foreign language requirement.

### **Admission to the Degree Curriculum**

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 at least 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 (required only for programs in ecology and evolutionary biology).

NOTE: Admission to a research program within the biology graduate program will be limited to the number of students for which adequate facilities and faculty sponsorship are available. Students should therefore be as specific as possible in their indication of research interests and career goals. Individual research programs will admit students solely on the basis of merit in relation to space and faculty availability.

Students who do not meet all of the above requirements for admission with classified graduate standing may be admitted with conditionally classified graduate standing upon the recommendation of the research program. Students so admitted will be advised as to the nature of their deficiency and the time to be allowed to achieve full classified graduate standing.

## **Biology**

### **Advancement to Candidacy**

All students must satisfy the general requirements for advancement to candidacy, including the foreign language requirement for the Master of Arts degree, as stated in Part Two of this bulletin. Presenting a successful thesis proposal (as indicated by submission of a completed thesis proposal form) is required to be advanced to candidacy.

### **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.

### **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, Riverside. 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:** T. Huxford, J. Love, T. Frey.

**Cardiovascular molecular biology:** R. Davis, C. Glembotski, R. Gottlieb, R. Sabbadini, M. Sussman.

**Cell and molecular immunology:** K. McGuire, C. Tsoukas, P. van der Geer.

**Gene expression:** G. Harris, W. Stumph, R. Zeller.

**DNA recombination and chromosome structure:** A. Segall.

**Molecular biology of viruses and bacteriophage:** R. Feuer, J. Perrault, F. Rohwer, R. Wolkowicz.

**Molecular evolution:** C. Arenas-Mena, S. Kelley, E. Waters.

**Molecular microbiology:** K. Doran, D. Lipson, S. Maloy.

**Neurobiology:** R. Zayas.

**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.

##### 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 dissertation research results and proposed dissertation 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 dissertation 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 dissertation 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 dissertation 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 2006-07, support package included tuition, a stipend (approximately \$22,000-\$24,000), 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, Feuer, Edwards, Frey, Glembotski, Gottlieb, Harris, Huxford (Chemistry and Biochemistry), Kelley, Krisans, Lipson, Love (Chemistry and Biochemistry), Maloy, McGuire, Paolini, Perrault, Rohwer, Sabbadini, Scott (Psychology), Segall, Stumph (Chemistry and Biochemistry), Sussman, Tsoukas, van der Geer (Chemistry and Biochemistry), Waters, Wolkowicz, 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/ecology/prog\\_phd.php](http://www.bio.sdsu.edu/ecology/prog_phd.php)

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.

### **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: Mark W. Schwartz

**SDSU Faculty:** Anderson, Bohonak, Clark, Deutschman, Edwards, Franklin, Hentschel, Hovel, Hurlbert, Lai, Lewison, Lipson, McClenaghan, Oechel, Reeder, Regan, K. Williams

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# Molecular Biology

## Faculty

Greg L. Harris, Ph.D., Professor of Biology  
(Molecular Biology Institute Director)

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

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

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

Christopher C. Glembotski, Ph.D., Professor of Biology and  
Associate Dean of the Division of Graduate Affairs

Roberta A. Gottlieb, M.D., Professor of Biology

Stanley R. Maloy, Ph.D., Professor of Biology and  
Dean of the College of Sciences

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

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

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 and Biochemistry  
(Graduate Adviser)

Mark A. Sussman, Ph.D., Professor of Biology

Constantine Tsoukas, Ph.D., Professor of Biology (Graduate Adviser)

Shelli R. McAlpine, Ph.D., Associate Professor of Chemistry and  
Biochemistry

P.J.E. (Jenny) Quintana, Ph.D., Associate Professor of Public Health

Robert W. Zeller, Ph.D., Associate Professor of Biology

César Arenas-Mena, Ph.D., Assistant Professor of Biology

Kelly Doran, Ph.D., Assistant Professor of Biology

Ralph Feuer, Ph.D., Assistant Professor of Biology

Tom Huxford, Ph.D., Assistant Professor of Chemistry and  
Biochemistry

Scott Kelley, Ph.D., Assistant Professor of Biology

John J. Love, Ph.D., Assistant Professor of Chemistry and  
Biochemistry

Forest Rohwer, Ph.D., Assistant Professor of Biology

Peter van der Geer, Ph.D., Assistant Professor of Chemistry and  
Biochemistry

Elizabeth R. Waters, Ph.D., Assistant Professor of Biology

Roland Wolkowicz, 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 a concentration 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. See Biology in this section of the bulletin for information on how to apply.

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 and are also available at <http://www.bio.sdsu.edu>.

## 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.

# Biomedical Quality Systems

In the Center for Bio/Pharmaceutical 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/>**

## Faculty Members of the Center for Bio/Pharmaceutical and Biodevice Development

\*Stanley R. Maloy, Ph.D., Professor of Biology, Dean of the College of Sciences, Interim Director, Regulatory Affairs Program, Center for Bio/Pharmaceutical 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 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 *Graduate Bulletin*.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to Biomedical Quality Systems.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Center for Bio/Pharmaceutical and Biodevice Development

The following materials should be mailed or delivered to:

Master of Science in Biomedical Quality Systems  
Director of Biomedical Quality Systems Programs, CBBD  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4610

- (1) Three letters of recommendation sent from persons who are knowledgeable about the candidate's potential for success in graduate study.
- (2) 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.
- (3) List of any employment or volunteer experience relevant to the degree program.
- (4) 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 39 units as follows:

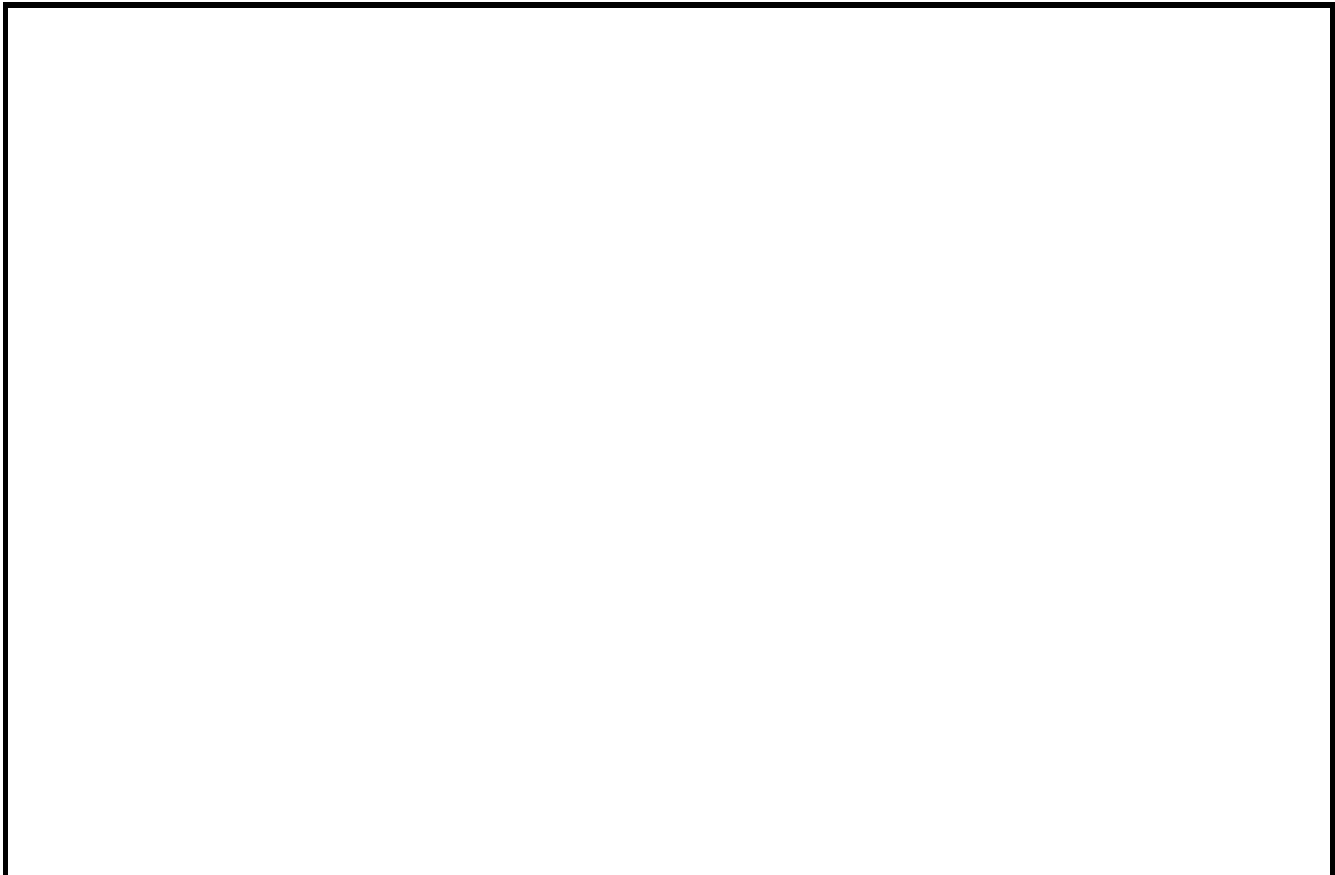
1. Complete 24 units of required courses.

BQS 601	Biomedical Quality Systems (3)
BQS 621	Quality Audits: Internal, Vendors, and Contract Services (3)
BQS 730	Good Manufacturing, Laboratory, and Clinical Practices (3)
BQS 745	Document Control Quality System (3)
RA 778	Quality Control and Quality Assurance: Pharmaceuticals, Biologics, and Medical Devices (3)
BA 651	Organizational Behavior (3)
BA 662	Operations Management (3)
IDS 705	Communication Strategies (3)

2. Complete 15 units of electives from list of elective courses and Biomedical Quality Systems 799A for students in Plan A. Students in Plan B must complete a comprehensive examination.

**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 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)
RA 780	Good Clinical Practices (2)



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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

Kung-Jong Lui, Ph.D., Professor of Statistics  
Donald J. Slymen, Ph.D., Professor of Public Health  
John E. Alcaraz, Ph.D., Associate Professor of Public Health  
Douglas H. Deutschman, Ph.D., Associate Professor of Biology  
Juanjuan Fan, Ph.D., Associate Professor of Statistics  
Ming Ji, Ph.D., Associate Professor of Public Health  
Richard Levine, Ph.D., Associate Professor of Statistics  
Chii-Dean Lin, Ph.D., Associate Professor of Statistics  
Hector Lemus, Dr.P.H., Assistant Professor of Public Health

## 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

Accredited by AACSB International—The Association to Advance Collegiate Schools of Business

**OFFICE: Student Services 3428**  
**TELEPHONE: 619-594-8073 / FAX: 619-594-1863**  
**E-MAIL: [gradbus@mail.sdsu.edu](mailto:gradbus@mail.sdsu.edu)**  
**<http://www.sdsu.edu/business>**

## Associateships

Graduate teaching associateships and graduate nonteaching associateships in business administration are available to a limited number of qualified students. Applications 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 Programs Office in the College of Business Administration, 619-594-8073, prior to applying for admission.

## Admission to Graduate Study

Admission to the college's graduate programs is competitive. 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.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Graduate Programs Office in the College of Business Administration.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GMAT scores (<http://www.mba.com>, SDSU institution code 9LT-2P-73);

- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.toefl.org>, SDSU institution code 4682).

### Master of Business Administration Degree

#### Master of Business Administration Degree and Juris Doctor Degree

#### Master of Business Administration Degree and Master of Arts Degree in Latin American Studies

The following materials should be mailed or delivered to:

Graduate Business Programs  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-8228

- (1) Personal statement;
- (2) Resume;
- (3) Letters of reference (optional; maximum of three).

### Master of Business Administration Degree for Executives

The following materials should be mailed or delivered to:

Chris Graham, Executive Director,  
Specialized Programs and External Affairs  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-8232

- (1) Two sets of official transcripts (in sealed envelopes);
- (2) Two letters of recommendation (forms are available on the Web site);
- (3) A one-page statement of career objectives;
- (4) Resume.

Complete directions are included in the MBA for Executives program application packet. Call 619-594-6010 or <http://www.sdsu.edu/emba>.

## **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 a maximum of 48 units and a minimum of 30 units of graduate coursework. Up to six units of 500-level courses may be included in the program and at least nine units of program courses must be completed after advancement to candidacy.

Up to 12 units of coursework may be accepted for transfer credit for programs of study consisting of 33 or more units. Up to nine units of coursework may be accepted for transfer credit for programs of study consisting of 30 units. Transfer credit will be accepted for graduate coursework completed at an accredited AACSB institution or with the approval of the director of graduate programs.

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 seven courses. (21 units)
  - BA 650 Financial Reporting and Analysis I (3)
  - BA 651 Organizational Behavior (3)
  - BA 652 Statistical Analysis (3)
  - BA 653 Managerial Economics (3)
  - BA 655 Marketing (3)
  - BA 662 Operations Management (3)
  - BA 665 Financial Management I (3)

A maximum of 18 units of core courses may be waived.

2. Complete one course from each of the below listed themes. (6 units)

#### **Corporate Responsibility: Legal, Ethical, and Social Issues in Business Theme**

ACCTG 681	Seminar in Regulatory and Management Controls (3)
FIN 604	Legal Environment for Executives (3)
IDS 755	Information Systems Security Management (3)
MGT 722	Seminar in Business Ethics and Social Institutions (3)
MGT 746	Seminar in Corporate Governance (3)

#### **Management of Technology Issues in Business Theme**

IDS 688	Information Systems in Organizations (3)
IDS 691	Decision Support Systems (3)

3. Complete 18 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 courses from three out of the five 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
- Real Estate
- Supply Chain Management

**Global Entrepreneurship:** The Global Entrepreneurship MBA program is a concentrated one-year specialization in which students study 10-12 weeks in each of four regions of the world: San Diego, Hong Kong, Dubai, and Delhi. Faculty are drawn from the SDSU College of Business Administration and from partner institutions: Chinese University of Hong Kong, Indian Institute of Management—Lucknow, the United Arab Emirates Higher Colleges of Technology, and the American University of Beirut. No core courses may be waived.

**Sports Business Management:** The Sports Business Management MBA program is an intensive, full-time, 48-unit program with classroom work beginning in January and continuing until December, including summer, followed by a four- to six-month internship. The three components include: core MBA curriculum; theme and elective courses; internship and culminating experience. No core courses may be waived.

### **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.

## **Master of Business Administration for Executives**

**(Offered only through the College of Extended Studies)**

### **Admission to the Degree Curriculum**

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.

### **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 and Specialized Programs Office in the College of Business Administration, and is an alternative path for the Master of Business Administration degree. The program is designed especially to meet the needs of mid-career executives. 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 can choose from two concentrations: general and life sciences. Students accepted for the M.B.A. for Executives concentration are fully matriculated in the university and meet all university requirements as established by the Graduate Council.

All courses offered for the general MBA for Executives concentration are scheduled in a modular fashion on alternate Fridays and Saturdays over a 24-month period for the convenience of working executives.

The MBA for Executives in life sciences concentration is a 20-month program focusing on bringing life science products from concepts to market. A blended instructional model is used in which students complete courses offered in both an online format and in intensive face-to-face sessions during residency periods. The curriculum incorporates courses from the College of Business Administration and the College of Sciences. 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 schedule, 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 study containing 48 units of 600- and 700-numbered courses. These courses will be offered in a predetermined pattern. 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).

**MBA for Executives**

BA 601	Management of Organizations and Human Resources (3)
BA 602	Statistics for Business Decisions (3)
BA 603	Executive Financial Accounting (2)
BA 604	Executive Managerial Accounting (2)
BA 605	Managerial Marketing (2)
BA 615	Strategic Financial Management (3)
BA 616	Competitive Analysis (3)
BA 700	Business in a Global Environment (3)
BA 701	Executive Entrepreneurship (3)
BA 702	Social Responsibility: Legal and Ethical Environment of Business (3)
BA 703	Strategic Management (3)
BA 705	Marketing Strategy (2)
BA 707	Exec Seminar in Negotiations (2)
BA 709	Seminar in the Global Financial Environment (3)
BA 710	Executive Leadership (3)
BA 711	Seminar in Contemporary Challenges (5)
BA 790	Directed Readings in Business Administration (3) Cr/NC

**MBA for Executives in Life Sciences**

ACCTG 696	Accounting for Executives in Life Sciences (3)
BA 601	Management of Organizations and Human Resources (3)
BA 615	Strategic Financial Management (3)
BA 655	Marketing (3)
BA 710	Executive Leadership (3)
BA 711	Seminar: Value Chain in Health Care (3)
BA 790	Directed Readings in Business Administration (3) Cr/NC
IDS 705	Communications Strategies (3)
MGT 745	Seminar in Corporate Entrepreneurship (3)
MKT 761	Product Innovation Management (3)
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 775	Clinical Trials: Issues in Design, Conduct, and Evaluation (3)
RA 781	Ethics for Healthcare Professionals (3)

**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 (3)
BA 651	Organizational Behavior (3)
BA 652	Statistical Analysis (3)
BA 653	Managerial Economics (3)
BA 655	Marketing (3)
BA 662	Operations Management (3)
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 Division of Graduate Affairs.

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 Division of Graduate Affairs 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 Management	<b>(05131)</b>
Marketing	<b>(05061)</b>
**Real Estate	<b>(05091)</b>
Supply Chain Management	<b>(05111)</b>
Taxation	<b>(05064)</b>
	<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:"

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 Degree and Juris Doctor Degree (California Western School of Law)

(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 law and business administration for advanced practice in many areas where the fields converge. Both degrees must be awarded in the same semester.

#### Admission to the Degree Curriculum

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 graduate business programs, 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

##### (30-48 Units—Including up to 12 units transferred from California Western School of Law)

At least 21 of the total units required must be completed in residence at San Diego State University. Up to 12 units from California Western School of Law will be accepted for transfer credit for programs of study.

- Complete the following core of seven courses. (21 units)

BA 650	Financial Reporting and Analysis I (3)
BA 651	Organizational Behavior (3)
BA 652	Statistical Analysis (3)
BA 653	Managerial Economics (3)
BA 655	Marketing (3)
BA 662	Operations Management (3)
BA 665	Financial Management I (3)

A maximum of 18 units of core courses may be waived.
- Management of Technology Theme (3 units)

IDS 688	Information Systems in Organizations (3)
IDS 691	Decision Support Systems (3)
- BA 780 Field Studies in Business (3)
- Electives: Six to nine units
- BA 795 Integrative Business Analysis (3)

#### 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 Degree and Juris Doctor Degree (Thomas Jefferson School of Law)

(Major Code: 05995)

#### General Information

The College of Business Administration and the Thomas Jefferson 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 law and business administration for advanced practice in many areas where the fields converge. Both degrees must be awarded in the same semester.

### Admission to the Degree Curriculum

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 Thomas Jefferson 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 graduate business programs, San Diego State University, and the associate dean, Thomas Jefferson School of Law.

### Specific Requirements for the MBA/JD Concurrent Degree

#### College of Business Administration

**(30-48 Units—Including up to 12 units transferred from Thomas Jefferson School of Law)**

At least 21 of the total units required must be completed in residence at San Diego State University. Up to 12 units from Thomas Jefferson School of Law will be accepted for transfer credit for programs of study.

1. Complete the following core of seven courses. (21 units)
 

BA 650	Financial Reporting and Analysis I (3)
BA 651	Organizational Behavior (3)
BA 652	Statistical Analysis (3)
BA 653	Managerial Economics (3)
BA 655	Marketing (3)
BA 662	Operations Management (3)
BA 665	Financial Management I (3)

A maximum of 18 units of core courses may be waived.
2. Management of Technology Issues in Business Theme (3 units)
 

IDS 688	Information Systems in Organizations (3)
IDS 691	Decision Support Systems (3)
3. BA 780 Field Studies in Business (3) (Cr/NC)
4. Electives: Six to nine units
5. BA 795 Integrative Business Analysis (3)

#### Thomas Jefferson School of Law

**(76 Units)**

- Business Associations (4)
- Civil Procedure I and II (6)
- Constitutional Law I and II (6)
- Contracts I and II (6)
- Criminal Law (3)
- Criminal Procedure (3)
- Evidence (4)
- Legal Writing I and II (7)
- Professional Responsibility (3)
- Property I and II (6)
- Remedies (3)
- Torts I and II (6)
- Internship (5)
- Electives: 14 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 | Thomas Jefferson 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 Degree and Master of Arts Degree in Latin American Studies

#### 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 director of graduate programs in the College of Business Administration.

#### Admission to the Degree Curriculum

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 54-72 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 seven courses (21 units):
 

BA 650	Financial Reporting and Analysis I (3)
BA 651	Organizational Behavior (3)
BA 652	Statistical Analysis (3)
BA 653	Managerial Economics (3)
BA 655	Marketing (3)
BA 662	Operations Management (3)
BA 665	Financial Management I (3)

A maximum of 18 units of core courses may be waived.
3. Complete one course from each of the below listed themes (6 units):

#### Corporate Responsibility: Legal, Ethical, and Social Issues in Business Theme

- |           |  |
|-----------|--|
| ACCTG 681 | Seminar in Regulatory and Management Controls (3)      |
| FIN 604   | Legal Environment for Executives (3)                   |
| MGT 722   | Seminar in Business Ethics and Social Institutions (3) |
| MGT 746   | Seminar in Corporate Governance (3)                    |

#### Management of Technology Issues in Business Theme

- |         |  |
|---------|--|
| IDS 688 | Information Systems in Organizations (3) |
| IDS 691 | Decision Support Systems (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)

## Business Administration

- 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 600 Seminar in Latin American Studies (3)  
LATAM 601 Seminar on Methodology of Latin American Studies (3)

The remaining 18 units selected from the following list of courses:

### Latin American Studies

- LATAM 550 Mexican-US Border from a Latin American Perspective (3)  
LATAM 560 Latin American after World War II (3)  
LATAM 580 Special Topics \* (3)  
LATAM 696 Experimental Topics\* (3)  
LATAM 795 Latin American Studies Internship (3) Cr/NC  
LATAM 797 Research (3) Cr/NC/RP

### Anthropology

- ANTH 520 Ethnographic Field Methods (3)  
ANTH 582 Regional Anthropology\* (3)  
ANTH 583 Topical Anthropology \* (3)

### Economics

- ECON 565 North American Economic Relations (3)  
ECON 720 Seminar in Development and Planning\* (3)

### History

- 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)

### Political Science

- 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 651 Seminar in Migration and Border Politics (3)  
POL S 667 Seminar in Latin American Political Systems (3)

### Sociology

- SOC 554 United States-Mexico Transborder Populations and Social Change (3)  
SOC 740 Seminar: Immigration (3)

### California Western School of Law

Students may take two courses from California Western School of Law with the approval of the Latin American Studies graduate adviser. Students must apply to enroll under the provisions of the affiliation agreement with the California Western School of Law.

\* Acceptable when of relevant content; check with the Latin American Studies graduate adviser before enrolling. 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.

A Master of Engineering degree is offered for students who are interested in a career in engineering with a business/management emphasis.

For course requirements consult Engineering in this section of the bulletin.

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# Accountancy

In the College of Business Administration

**OFFICE: Student Services 2411**  
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**E-MAIL: [accounting@mail.sdsu.edu](mailto:accounting@mail.sdsu.edu)**

## Faculty

Sharon M. Lightner, Ph.D., Director of School  
John C. Anderson, Ph.D., Professor of Accountancy  
C. Janie Chang, Ph.D., The Vern E. Odmark Chair in Accountancy,  
Professor of Accountancy  
Gary M. Grudnitski, Ph.D., Professor of Accountancy  
Nathan A. Oestreich, Ph.D., Professor of Accountancy  
Carol F. Venable, Ph.D., Professor of Accountancy  
(Graduate Adviser)  
Gerald E. Whittenburg, Ph.D., Professor of Accountancy  
(Graduate Adviser)  
Martha S. Doran, Ph.D., Associate Professor of Accountancy  
(Graduate Adviser)  
Gun-Ho Joh, Ph.D., Associate Professor of Accountancy  
(Graduate Adviser)  
Victoria Krivogorsky, Ph.D., Associate Professor of Accountancy  
David DeBoskey, Ph.D., Assistant Professor of Accountancy  
Damon M. Fleming, 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, widely recognized throughout the country for the breadth of his research and his technical thoroughness, held the chair from 1984 until his retirement in 2006. Dr. Janie Chang, recognized for research and teaching was awarded the chair in fall 2006.

## 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, introductory managerial accounting, an English writing and/or composition course at a university where English is the primary language of instruction, 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 Division of Graduate Affairs.

## 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. At least 12 units of accountancy courses must be numbered 650 and above (in special cases, nine units with adviser approval). 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 624, Taxation for Managers; 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:

Accounting Information Systems  
Corporate  
Professional  
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.

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## College of Business Administration Departments

### Finance

**OFFICE: Student Services 3356**  
**TELEPHONE: 619-594-5323 / FAX: 619-594-3272**

#### Faculty

Nikhil P. Varaiya, Ph.D., Professor of Finance,  
Chair of Department  
Swaminathan G. Badrinath, Ph.D., Professor of Finance  
Andrew Q. Do, Ph.D., Professor of Finance  
(Graduate Adviser, Real Estate)  
David P. Ely, Ph.D., Professor of Finance, Director of Graduate  
Programs in the College of Business Administration  
Kamal M. Haddad, Ph.D., Professor of Finance  
(Graduate Adviser)  
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)  
Russell L. Block, J.D., Associate Professor of Finance, Emeritus  
Xudong An, Ph.D., Assistant Professor of Finance  
Stefano Gubellini, Ph.D., Assistant Professor of Finance  
Jaemin Kim, Ph.D., Assistant Professor of Finance  
Marie-Eve Lachance, Ph.D., Assistant Professor of Finance  
Kuntara Pukthuanthong, Ph.D., Assistant Professor of Finance  
Joseph K. Tanimura, Ph.D., Assistant Professor of Finance  
Sehyun Yoo, Ph.D., Assistant Professor of Finance (IVC)

### Information and Decision Systems

**OFFICE: Student Services 2411**  
**TELEPHONE: 619-594-5316 / FAX: 619-594-3675**

#### Faculty

Bruce A. Reinig, Ph.D., Professor of Information and Decision  
Systems, Chair of Department  
James R. Beatty, 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 and Associate Dean for Academic Affairs of the  
College of Business Administration  
John M. Penrose, Ph.D., Professor of Information and Decision  
Systems  
Feraidoon Raafat, Ph.D., Professor of Information and Decision  
Systems (Graduate Adviser)  
Bongsik Shin, Ph.D., Professor of Information and  
Decision Systems (Graduate Adviser)  
Gretchen N. Vik, Ph.D., Professor of Information and Decision Systems  
Yeongling Helio Yang, Ph.D., Professor of Information and  
Decision Systems  
Theophilus Addo, Ph.D., Associate Professor of Information and  
Decision Systems  
Annette C. Easton, Ph.D., Associate Professor of Information and  
Decision Systems  
George K. Easton, Ph.D., Associate Professor of Information and  
Decision Systems  
Murray Jennex, Ph.D., Associate Professor of Information and  
Decision Systems  
Robert Plice, Ph.D., Assistant Professor of Information and  
Decision Systems

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### Management

**OFFICE: Student Services 3356**  
**TELEPHONE: 619-594-5306 / FAX: 619-594-3272**

#### Faculty

Gangaram Singh, Ph.D., Professor of Management,  
Chair of Department (Graduate Adviser)  
Alex F. De Noble, Ph.D., Professor of Management,  
(Graduate Adviser)  
Michael L. Hergert, Ph.D., Professor of Management  
Dong I. Jung, Ph.D., Professor of Management  
Lynn M. Shore, Ph.D., Professor of Management  
Chamundeswari Sundaramurthy, Ph.D., Professor of Management  
Beth G. Chung-Herrera, Ph.D., Associate Professor of Management  
Lawrence C. Rhyne, Ph.D., Associate Professor of Management  
(Graduate Adviser)  
Lori V. Ryan, Ph.D., Associate Professor of Management  
Michelle A. Dean, Ph.D., Assistant Professor of Management  
Karen M. Ehrhart, Ph.D., Assistant Professor of Management  
John D. Francis, Ph.D., Assistant Professor of Management  
Martina Musteen, Ph.D., Assistant Professor of Management  
Amy Randel, Ph.D., Assistant Professor of Management  
Congcong Zheng, Ph.D., Assistant Professor of Management

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### Marketing

**OFFICE: Student Services 3356**  
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#### Faculty

George E. Belch, Ph.D., Professor of Marketing,  
Chair of Department  
William E. Baker, Ph.D., Professor of Marketing  
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)  
Heather L. Honea, Ph.D., Associate Professor of Marketing  
Paula Peter, Ph.D., Assistant Professor of Marketing



# Chemistry

In the Department of Chemistry and Biochemistry  
In the College of Sciences

**OFFICE: Geology/Mathematics/Computer Science 209**

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**E-MAIL: [cheminfo@sciences.sdsu.edu](mailto:cheminfo@sciences.sdsu.edu)**

**<http://www.sci.sdsu.edu/chemistry>**

## Faculty

Carl J. Carrano, Ph.D., Professor of Chemistry and Biochemistry,  
Chair of Department  
Douglas B. Grotjahn, Ph.D., Professor of Chemistry and Biochemistry  
(Graduate Admissions Adviser)  
Robert P. Metzger, Ph.D., Professor of Chemistry and Biochemistry  
Stephen B. W. Roeder, Ph.D., Professor of Chemistry and  
Biochemistry and Physics, and  
Dean of the Imperial Valley Campus  
William E. Stumph, Ph.D. Professor of Chemistry and Biochemistry  
William G. Tong, Ph.D., Professor of Chemistry and Biochemistry  
B. Mikael Bergdahl, Ph.D., Associate Professor of Chemistry and  
Biochemistry  
Dale A. Chatfield, Ph.D., Associate Professor of Chemistry and  
Biochemistry  
Thomas E. Cole, Ph.D., Associate Professor of Chemistry and  
Biochemistry (Graduate Adviser)  
Andrew L. Cooksy, Ph.D., Associate Professor of Chemistry and  
Biochemistry  
John J. Love, Ph.D., Associate Professor of Chemistry and  
Biochemistry  
Shelli R. McAlpine, Ph.D., Associate Professor of Chemistry and  
Biochemistry  
David P. Pullman, Ph.D., Associate Professor of Chemistry and  
Biochemistry (Undergraduate Adviser)  
Diane K. Smith, Ph.D., Associate Professor of Chemistry and  
Biochemistry  
Laurance G. Beauvais, Ph.D., Assistant Professor of Chemistry and  
Biochemistry  
Miriam V. Bennett, Ph.D., Assistant Professor of Chemistry and  
Biochemistry  
Christopher R. Harrison, Ph.D., Assistant Professor of Chemistry and  
Biochemistry  
Tom Huxford, Ph.D., Assistant Professor of Chemistry and  
Biochemistry  
Gregory Kalyuzhny, Ph.D., Assistant Professor of Chemistry and  
Biochemistry  
Peter van der Geer, Ph.D., Assistant Professor of Chemistry and  
Biochemistry

## 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, 400, 500, and 600 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; laser systems for spectroscopy, and x-ray diffractometers for both small and macromolecules. Several groups have inert-atmosphere gloveboxes for conducting research on air- and moisture-sensitive compounds. 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> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Chemistry and Biochemistry.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Department of Chemistry and Biochemistry

The following materials should be mailed or delivered to:

Department of Chemistry and Biochemistry  
(Attention: Graduate Admissions Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1030

- (1) Three letters of reference from people who can comment on your academic and research abilities;
- (2) Personal statement, including your goals and motivation for graduate study;
- (3) Application for teaching associate position (if desired). Refer to <http://www.chemistry.sdsu.edu/graduate/forms/> to download application form.

**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 790 is required. At least 21 units of graded graduate courses (500 level or above) must be taken in at least three of the five disciplines within chemistry. These 21 units must be numbered below 790. A maximum of three units of Chemistry 797 or 798 may be used provided a written report is approved by course instructor. 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 790, 791, 792, and 799A are required. A student must pass a final oral examination on the thesis.

**Section II.  
Doctoral Program**

<http://www.chemistry.sdsu.edu/chemistry/>

**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 Adviser: Thomas E. Cole

Graduate Admissions: Douglas Grotjahn

Committee Members: Bergdahl, Carrano, Chatfield, Cole, Cooksy, Grotjahn, Liang, Love, McAlpine, Metzger, Pullman, Roeder, Smith, Stumph, Tong

**University of California, San Diego:**

Vice Chair of Graduate Education: Daniel Donoghue

Committee Members: Hermann, Muller, Prather, Tauber, Tezcan

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# Chicana and Chicano Studies

In the College of Arts and Letters

**OFFICE: Arts and Letters 348**

**TELEPHONE: 619-594-6452 / FAX: 619-594-3195**

## Faculty

Adelaida R. Del Castillo, Ph.D., Associate Professor of Chicana and Chicano Studies, Chair of Department  
Richard Griswold del Castillo, Ph.D., Professor of Chicana and Chicano Studies, Emeritus  
D. Emily Hicks, Ph.D., Professor of English and Comparative Literature and Chicana and Chicano Studies  
Isidro D. Ortiz, Ph.D., Professor of Chicana and Chicano Studies  
José R. Villarino, Ph.D., Professor of Chicana and Chicano Studies, Emeritus  
María de la Luz Ibarra, Ph.D., Associate Professor of Chicana and Chicano Studies  
Norma V. Iglesias Prieto, Ph.D., Associate Professor of Chicana and Chicano Studies  
Victoria González-Rivera, Ph.D., Assistant Professor of Chicana and Chicano Studies

## Associateships and Assistantships

Graduate teaching associateships and graduate assistantships in Chicana and Chicano 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 Chicana and Chicano Studies or at <http://www.gau.sdsu.edu>.

## General Information

The Department of Chicana and Chicano Studies offers graduate study leading to the Master of Arts degree in Chicana and Chicano Studies.

The department has a distinguished faculty in the humanities and social sciences with special expertise in the U.S.-Mexico border and gender issues. The faculty's multidisciplinary orientation encourages students to explore many theoretical approaches grounded in a community-oriented and borderlands theory and praxis.

The Master of Arts degree provides advanced training for students who plan to make the master's degree their terminal degree as well as those who want to continue their studies at the doctoral level with an emphasis in Chicana and Chicano studies in a borderlands context.

The master's degree also provides advanced training for those who want to pursue professional degrees in the fields of public health, education, counseling, law, and social work. The master's degree provides students with the ability to work with professional competence in U.S.-Mexico environments involving populations of Mexican and Latin American origin in both the private and public sector.

## Admission to Graduate Study

The application deadlines are posted on the Web or can be obtained from the graduate adviser. All students must satisfy the general requirements for admission to the university with classified graduate standing as described in Part Two of this bulletin. In addition, students must demonstrate sufficient preparation for the program. This may include a bachelor's degree in Chicana and Chicano studies or a related discipline from an accredited institution or completion of equivalent academic preparation as determined by the Graduate Dean. 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 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 master's program in Chicana and Chicano Studies is 3.0 for the last 60 units (2.85 overall) of the student's undergraduate work plus satisfactory scores on the verbal and quantitative sections of the GRE.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Chicana and Chicano Studies.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Department of Chicana and Chicano Studies

The following materials should be mailed or delivered to:

Department of Chicana and Chicano Studies  
(Attention: Graduate Coordinator)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-6034

- (1) Two letters of reference from persons with direct knowledge of the applicant's ability;

- (2) Statement of purpose;

- (3) A writing sample (such as a research paper).

## 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: 22131)**

In addition to meeting the requirements for the Master of Arts degree, as described in Part Two of this bulletin, the student must complete at least 30 units of graduate coursework with a core of courses to include: Chicana and Chicano Studies 601, 602, 605, 798. Students must complete a specialization in Chicana Studies or Borderland Studies. For students specializing in gender, Chicana and Chicano Studies 554 or Sociology 554 is required. For students specializing in Borderland Studies, Chicana and Chicano Studies 595 is required. Specialization courses in either of these areas must be approved by the graduate adviser.

The total program shall include a minimum of 15 units in 600- and 700-numbered courses. Students may select either Plan A or Plan B in consultation with the graduate adviser. Students electing Plan A must complete 799A (Thesis). Students electing Plan B must select one additional course in lieu of 799A and pass a comprehensive written examination.

# Child and Family Development

In the College of Education

**OFFICE: Education and Business Administration 403**  
**TELEPHONE: 619-594-5380 / FAX: 619-594-5921**  
**E-MAIL: [troberts@mail.sdsu.edu](mailto:troberts@mail.sdsu.edu)**

## Master of Science Degree in Child Development

No new students are being admitted to this program. For further information, contact the Department of Child and Family Development.

### Faculty

- \*Thomas W. Roberts, Ph.D., Professor of Child and Family Development, Chair of Department (Graduate Adviser)
- \*Audrey Hokoda, Ph.D., Associate Professor of Child and Family Development
- \*Shulamit N. Ritblatt, Ph.D., Associate Professor of Child and Family Development

### Faculty Committee for Child and Family Development

- Stuart C. Aitken, Ph.D., Professor of Geography
- Thereasa A. Cronan, Ph.D., Professor of Psychology
- Shoshana A. Grossbard, Ph.D., Professor of Economics
- Melbourne F. Hovell, Ph.D., Professor of Public Health
- Margie K. Kitano, Ph.D., Professor of Special Education and Associate Dean of the College of Education
- Vanessa L. Malcarne, Ph.D., Professor of Psychology
- Gerald Monk, Ph.D., Professor of Counseling and School Psychology
- Alberto M. Ochoa, Ed.D., Professor 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
- Carolyn L. Walker, Ph.D., Professor of Nursing
- André J. Branch, Ph.D., Associate Professor of Teacher Education
- Adelaida R. Del Castillo, Ph.D., Associate Professor of Chicana and Chicano Studies
- Margaret Field, Ph.D., Associate Professor and Department Chair of American Indian Studies

\*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.

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.

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.

<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.

## 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 for either Plan A (thesis) or Plan B (comprehensive examination).

Plan A and Plan B students applying for admission 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. Completion of prerequisites for the program of study. If students' undergraduate preparation is deemed insufficient, students will be required to complete specified courses (Child and Family Development 375A, 375B, 375C, and two units from Child and Family Development 378A, 378B, 378C, 378D) in addition to the minimum 31 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.
5. Completion of program application form.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Child and Family Development.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Department of Child and Family Development

Plan A applicants should mail or deliver following materials to:  
Department of Child and Family Development  
Attention: Dr. Thomas W. Roberts, Graduate Adviser  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4502

- (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 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.

To be considered for admission to the graduate program Plan B (comprehensive examination) in child development, an applicant must have a minimum of three years work experience in the field of child development. The applicant must submit to Enrollment Services the same admission materials as Plan A applicants. The applicant must submit the following for review by the Child Development Faculty Governing Board, which is in addition to the common admissions package:

Plan B applicants should mail or deliver the following materials to:  
Department of Child and Family Development  
Attention: Dr. Thomas W. Roberts, Graduate Adviser  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4502

- (1) Applicant's letter of intent which includes reason for seeking the degree and career goals;
- (2) Three letters of recommendation, two of which must be from an occupational reference as well as completion of a rating form by the employer assessing the administrative skills of applicant;
- (3) A resume;
- (4) A written personal statement by the applicant discussing background, interests, work experiences, abilities, and career goals as they apply to the applicant's desire for a graduate degree in child development;
- (5) Completion of a telephone or in person interview conducted by one or more members of the Child Development Faculty Governing Board.

## Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Two of this bulletin, have identified a thesis adviser if they are in Plan A or if they have been approved to follow Plan B, and taken Child and Family Development 790 with a grade of B or better.

## 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 31 units including at least 22 units of 600- and 700-numbered courses.

All students must complete:

1. A core sequence of five courses to include Child and Family Development 634, 660 (four units required), 670, 790, and Public Health 602 (for Plan A) or Counseling and School Psychology 622A (for Plan B).
2. A three unit course selected in conjunction with the program adviser.
3. Nine units of 500-level child and family development courses: Child and Family Development 560, 575, 578. (Graduate students who are alumni of the child and development program and received their B.S. degree in child development from San Diego State University, will complete the child and family development 500-level classes they did not take as part of their undergraduate program, and will select the remaining classes (to complete nine units) from other programs with the approval of the graduate adviser.)
4. Child and Family Development 799A (Plan A) or 798 (Plan B).

# City Planning

In the School of Public Affairs  
In the College of Professional Studies and Fine Arts

**OFFICE: Professional Studies and Fine Arts 100**  
**TELEPHONE: 619-594-6472 / FAX: 619-594-1165**

## Faculty

Stuart D. Henry, Ph.D., Professor of Public Affairs, Director of School  
Roger W. Caves, Ph.D., Professor of Public Affairs  
(Graduate Coordinator)  
Lawrence A. Herzog, Ph.D., Professor of Public Affairs  
Louis M. Rea, Ph.D., Professor of Public Affairs  
(M.P.A. Graduate Coordinator)  
Sherry Ryan, Ph.D., Associate Professor of Public Affairs

## General Information

The School of Public Affairs 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.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Public Affairs.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);  
(3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### School of Public Affairs

The following materials should be submitted by November 1 (October 1 for international students) for admission for the spring semester and May 1 for the fall semester to:

School of Public Affairs  
Graduate City Planning Program  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4505

- (1) Two letters of reference from persons in a position to judge the student's academic work and/or employment performance.

## 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:

1. PA 525 The U.S. City Planning Process (3)  
CP 625 Quantitative Techniques in Urban Planning (3)  
CP 630 Seminar in Urban Planning Implementation (3)  
CP 640 Seminar in Urban Planning Theory (3)  
CP 660 City Planning and Geographic Information Systems Applications (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)
2. Twelve units of 600- and 700-numbered courses in planning elective courses, readings and research.
3. CP 796 Internship in Urban Planning (3-6) Cr/NC
4. PA 604 Methods of Analysis in Public and Urban Affairs (3)
5. Other electives to complete program selected with the approval of adviser.
6. Students in Plan B are required to pass comprehensive written examinations in 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.

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# Communication

In the College of Professional Studies and Fine Arts

**OFFICE: Communication 237**

**TELEPHONE: 619-594-0716 / FAX: 619-594-0704**

**E-MAIL: [socdesk@mail.sdsu.edu](mailto:socdesk@mail.sdsu.edu)**

**<http://communication.sdsu.edu>**

## Faculty

William B. Snively, Ph.D., Professor of Communication,  
Director of School

Peter A. Andersen, Ph.D., Professor of Communication

Wayne A. Beach, Ph.D., Professor of Communication

George N. Dionisopoulos, Ph.D., Professor of Communication

Patricia J. Geist-Martin, Ph.D., Professor of Communication  
(Graduate Adviser)

Susan A. Hellweg, Ph.D., Professor of Communication

Myron W. Lustig, Ph.D., Professor of Communication, Emeritus

Brian H. Spitzberg, Ph.D., Professor of Communication

Valerie R. Renegar, Ph.D., Associate Professor of Communication

Kurt J. Lindemann, Ph.D., Assistant Professor of Communication

## General Information

The School of Communication offers graduate study leading to the Master of Arts degree in communication. The school's mission is to advance the theory and understanding of human communication. This mission includes the following objectives: to improve the practice of human communication; to study and teach the art, science, and practice of communication; and to provide an educational environment encouraging excellence, leadership, and creativity in communication scholarship and professional practice.

Priority is given to the development of students' expertise and skills in each of the following areas:

- Mastery of knowledge and abilities in communication theory and practice;
- Completion of thesis that prepare students to become change agents in the career paths they are pursuing;
- Collaboration in research and instructional teams;
- Participation in fieldwork in diverse settings relevant to the social issues being investigated;
- Presentation of scholarly papers at professional conferences;
- Co-authorship of research articles with faculty and other graduate students.

## Graduate Teaching Associate Program

Graduate Teaching Associate (GTA) positions are available to a limited number of qualified students. This valuable opportunity includes:

- Training in teaching the basic oral communication course and helping first-year undergraduates to improve their communication skills;
- A monthly stipend that helps to offset the expenses of graduate school;
- The possibility of full health benefits (health, dental, and vision).

Instructions for applying for a Graduate Teaching Associate position are available at

<http://communication.sdsu.edu/pages/applying.html>.

The deadline for applying for a GTA position is the same deadline as applying for admission to the graduate program (February 1 for fall semester).

## Admission to Graduate Study

The M.A. degree in Communication Studies admits students only in the fall semester. Application packages must be received and completed by previous March 1.

In addition to meeting the general requirements for admission to the university with classified graduate standing as outlined in Part Two of this bulletin, students applying for admission to the Master of Arts degree in communication with a specialization in communication studies are evaluated according to the following criteria:

1. Undergraduate major or minor in communication, speech communication, or a related discipline. Those lacking adequate undergraduate preparation may be admitted conditionally to the program and are required to take one or more proficiency courses identified, 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).

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Communication.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;
- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682). 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;
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

For international applicants for whom English is not their first language, TOEFL paper scores of 550 (or 213 online).

### School of Communication

Submit a cover letter and application support materials to:

Graduate Adviser  
School of Communication  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4560

### Cover Letter

- Indicates that you applied online, paid your fee, and submitted official transcripts and scores to Graduate Admissions;
- Indicates if you are applying for a Graduate Teaching Associate (GTA) position and describing the details of any teaching experience. If you did major in communication as an undergraduate, indicate any communication coursework that might prepare you for teaching.

**Application Support Materials**

(1) Letters of Recommendation

Three letters of recommendation from academic or professional references that speak to your ability to succeed in graduate studies. We prefer that at least two of the letters be written by professors who can speak to your academic background and capabilities.

(2) Personal Statement

A personal statement of purpose that (a) describes your interest in communication, (b) describes your undergraduate and/or professional preparation for graduate studies in the communication program, (c) articulates your personal and/or career objectives that graduate studies in communication will help you pursue, and (d) optional: describes your interest in a Graduate Teaching Associate position, addressing how this desire relates to your interest in communication, your past academic and professional experience, and your career objectives.

(3) Photocopies of Transcripts and Scores

It is essential to send photocopies of your transcripts and GRE scores (and TOEFL scores, if applicable) to the School of Communication. Eventually, we will receive the official transcripts and scores from Graduate Admissions; however, we may be in a position to review your materials and make admission and GTA decisions before the materials arrive from the Graduate Admissions office.

(4) A resume or vita

(5) OPTIONAL: Writing sample that you believe well represents your writing capabilities (e.g., a paper written for an undergraduate course).

**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, the student must complete a minimum of 30 units in courses acceptable in master's degree programs. 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.

The M.A. in communication studies provides advanced study of language, interaction, and communication in relational, organizational, cultural, medical, and societal contexts. Individuals in this specialization explore communication as an interactive process across diverse social relationships, activities and contexts. Please see the School of Communication Web site for the most current information:

<http://communication.sdsu.edu>.

Students may elect Plan A (Thesis) by completing Communication 799A (3 units) or Plan B (Comprehensive Examination) by completing three additional units of 600-700 level coursework in the School of Communication and pass the Comprehensive Examination in Communication.

Graduate Courses. The remaining 27 units of the program must include completion of Communication 601 with a grade of B or better; six units selected from Communication 610, 620, 640, 660, 665, 695, 706, 715, 721, 735, 750, 755, 771, 792; and six units selected with the approval of the graduate adviser. No more than six units may be taken as special study (Communication 798).



# Computational Science

In the College of Sciences

**OFFICE: Geology/Mathematics/Computer Science 206H**

**TELEPHONE: 619-594-3430 / FAX: 619-594-2459**

**<http://www.sci.sdsu.edu/compsi>**

## 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  
Joseph M. Mahaffy, Ph.D., Professor of Mathematics  
Eugene A. Olevisky, Ph.D., Professor of Mechanical Engineering  
Paul J. Paolini, Jr., Ph.D., Professor of Biology, Emeritus  
Patrick J. Papin, Ph.D., Professor of Physics and Associate Dean of  
the College of Sciences

Peter Salamon, Ph.D., Professor of Mathematics  
Anca Mara Segall, Ph.D., Professor of Biology  
Arlette R.C. Baljon, Ph.D., Associate Professor of Physics  
Peter Blomgren, Ph.D., Associate Professor of Mathematics  
Ricardo Carretero, Ph.D., Associate Professor of Mathematics  
Andrew L. Cooksy, Ph.D., Associate Professor of Chemistry and  
Biochemistry

Juanjuan Fan, Ph.D., Associate Professor of Statistics  
Calvin W. Johnson, Ph.D., Associate Professor of Physics  
Richard Levine, Ph.D., Associate Professor of Statistics  
John J. Love, Ph.D., Associate Professor of Chemistry and  
Biochemistry

Kim Bak Olsen, Ph.D., Associate Professor of Geological Sciences  
Michael O'Sullivan, Ph.D., Associate Professor of Mathematics  
Antonio Palacios, Ph.D., Associate Professor of Mathematics  
David P. Pullman, Ph.D., Associate Professor of Chemistry and  
Biochemistry

Marie A. Roch, Ph.D., Associate Professor of Computer Science  
Forest Rohwer, Ph.D., Associate Professor of Biology  
Eric L. Sandquist, Ph.D., Associate Professor of Astronomy  
Faramarz Valafar, Ph.D., Associate Professor of Computer Science  
Satchi Venkataraman, Ph.D., Associate Professor of Aerospace  
Engineering and Engineering Mechanics

Fridolin Weber, Ph.D., Associate Professor of Physics  
Michael W. Bromley, Ph.D., Assistant Professor of Physics  
Samuel K. Kassegne, Ph.D., Assistant Professor of Mechanical  
Engineering

Scott Kelley, Ph.D., Assistant Professor of Biology  
Robert J. Mellors, Ph.D., Resident Computer Geoscientist,  
Geological Sciences

## Admission to Graduate Study

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to Computational Science.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

(1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

(2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

(3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Master of Science Degree in Computational Science

The following materials mailed or delivered to:

Computational Science Research Center  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1245

- (1) Three letters of recommendation (in sealed and signed envelopes) from persons in a position to judge academic ability;
- (2) Personal statement of motivating interest for the program and briefly describe research interests and educational goals.

### Ph.D. Degree in Computational Science

The following materials should be mailed or delivered to:

Computational Science Research Center  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1245

- (1) Three letters of recommendation (in sealed and signed envelopes) from former or current professors, supervisors, or other appropriate persons;
- (2) Applicant's statement of purpose, explaining their interest in the program;
- (3) Claremont Graduate University application form available at <http://www.csrc.sdsu.edu>;
- (4) Joint doctoral program in computational science application form available at <http://www.csrc.sdsu.edu>;
- (5) Official transcripts (in sealed envelopes) from all postsecondary institutions attended.

## 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 and Biochemistry, 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

## Computational Science

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 the Degree Curriculum

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.

### 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:

- Twelve units selected from:
  - COMP 589 Computational Imaging (3)
  - CS 503 Scientific Database Techniques (3)
  - CS 505 Parallel Computing (3)
  - MATH 636 Mathematical Modeling (3)
  - MATH 693A Advanced Numerical Analysis (3)
  - MATH 693B Advanced Numerical Analysis (3)
- Six units of approved 500-, 600-, or 700-level courses in disciplines related to the student's specialization.
- Six units of approved 500-, 600-, or 700-level electives.
- 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.

### Concentration in Professional Applications

The concentration focuses on professional applications of computational science. Students take courses in the College of Business Administration which will enhance career opportunities. To enter the program, students must possess a bachelor's degree with a strong mathematical background. The student must complete a graduate program of 40 units to include the following:

#### Required core courses (21 units):

##### Core Courses

- COMP 526 Computational Methods for Scientists (3)
- COMP 589 Computational Imaging (3)
- COMP 601 Seminar: Business Skills for the Information Age (3)
- COMP 626 Applied Mathematics for Computational Scientists (3)

COMP 670 Seminar: Problems in Computational Science (3)

CS 503 Scientific Database Techniques (3)

CS 505 Parallel Computing (3)

#### Business component (7 units):

BA 651 Organizational Behavior (2)

BA 662 Operations Management (2)

IDS 750 Project Management (3)

#### Project (6 units):

COMP 797 Research (3) Cr/NC/RP

COMP 798 Special Study (3) and comprehensive examination

#### OR

COMP 799A Thesis or Project (3) Cr/NC/RP

#### Six units of electives:

MATH 538 Discrete Dynamical Systems and Chaos (3)

MATH 541 Introduction to Numerical Analysis and Computing (3)

MATH 542 Introduction to Numerical Solutions of Differential Equations (3)

MATH 543 Numerical Matrix Analysis (3)

MATH 696 Selected Topics in Mathematical Sciences: Dynamical Systems and Chaos II (3)

PHYS 580 Computational Physics (3)

STAT 671 Statistical Computing (3)

#### OR

Six units of approved 500, 600, or 700 level electives in disciplines related to the student's area of interest. A complete student program must be approved by the Computational Science Program Director.

## Section II. Doctoral Program

[http://www.csrc.sdsu.edu/csrc/education/graduate\\_programs/phd/](http://www.csrc.sdsu.edu/csrc/education/graduate_programs/phd/)

### General Information

San Diego State University and Claremont Graduate University, offer jointly a doctoral program in computational science and a concentration in statistics. 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 the Degree Curriculum

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.

**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

(Major Code: 07992)

The program consists of a minimum of 72 units of coursework, independent study, and research (including transfer credit) distributed as follows. Any deviation from the program of studies must be done with the approval of the program director.

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.

An additional 24 to 48 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 800, 810, 894, 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, Beyene, Bhattacharjee, Blomgren, Carretero, Castillo, Cooksy, Day, Deutschman, Edwards, Fargion, Frey, In, Johnson, Kelley, Kevorkian, Love, Mahaffy, McGuire, Mellors, Olevsky, Oseroff, O'Sullivan, Palacios, Paolini, Pullman, Roch, Rohwer, Salamon, Sandquist, Segall, Tarokh, Valafar, Venkataraman, Waheed, Weber

### Claremont Graduate University

Program Director: John Angus

Committee Members: Angus, Cumberbatch, Dewey, Landsberg, Nadim, dePillis, Liebesking-Hadas, Raval, Spanier, Wild, Williamson

### Concentration in Statistics

Completion of the following coursework before entering the concentration: two semesters of mathematical statistics (at the level of Statistics 670A-670B), one semester of regression analysis (at the level of Statistics 510), and one semester of linear algebra (at the level of Mathematics 524), and a working knowledge of a programming language.

#### Required courses at SDSU (24 units):

STAT 700, 701, 702.

MATH 693A or CS 662.

COMP 589, CS 600, and a database course in consultation with the faculty advisers.

Three units from Statistics 676, 678, 696, or a statistics course with strong computational component chosen to be tailored to the student's research interests in consultation with the faculty advisers at SDSU and CGU.

#### Required courses at Claremont Graduate University (24 units):

MATH 352, 353, 355, 368, 389.

Three units from Mathematics 342, 350, 351, 354, 357, 369, 469, or a statistics/probability course with strong computational component chosen to be tailored to the student's research interests in consultation with the faculty advisers at SDSU and CGU.

#### Minimum 24 units of research, practicum, dissertation, and graduate seminar at either institution:

Research units at SDSU: COMP 800, 894, 897, 898, 899

Research units at CGU: MATH 495, 498, 499

### Faculty

The following faculty members of the cooperating institutions are available for direction of research in the statistics concentration.

#### **San Diego State University**

Program Directors: José E. Castillo and Richard A. Levine  
Doctoral advisers: Bailey, Duncan, Fan, Levine, Lin, Lui

#### **Claremont Graduate University**

Program Director: John Angus  
Doctoral advisers: Angus, Hardin, Martinosi, Myhre, Raval, Schellhorn

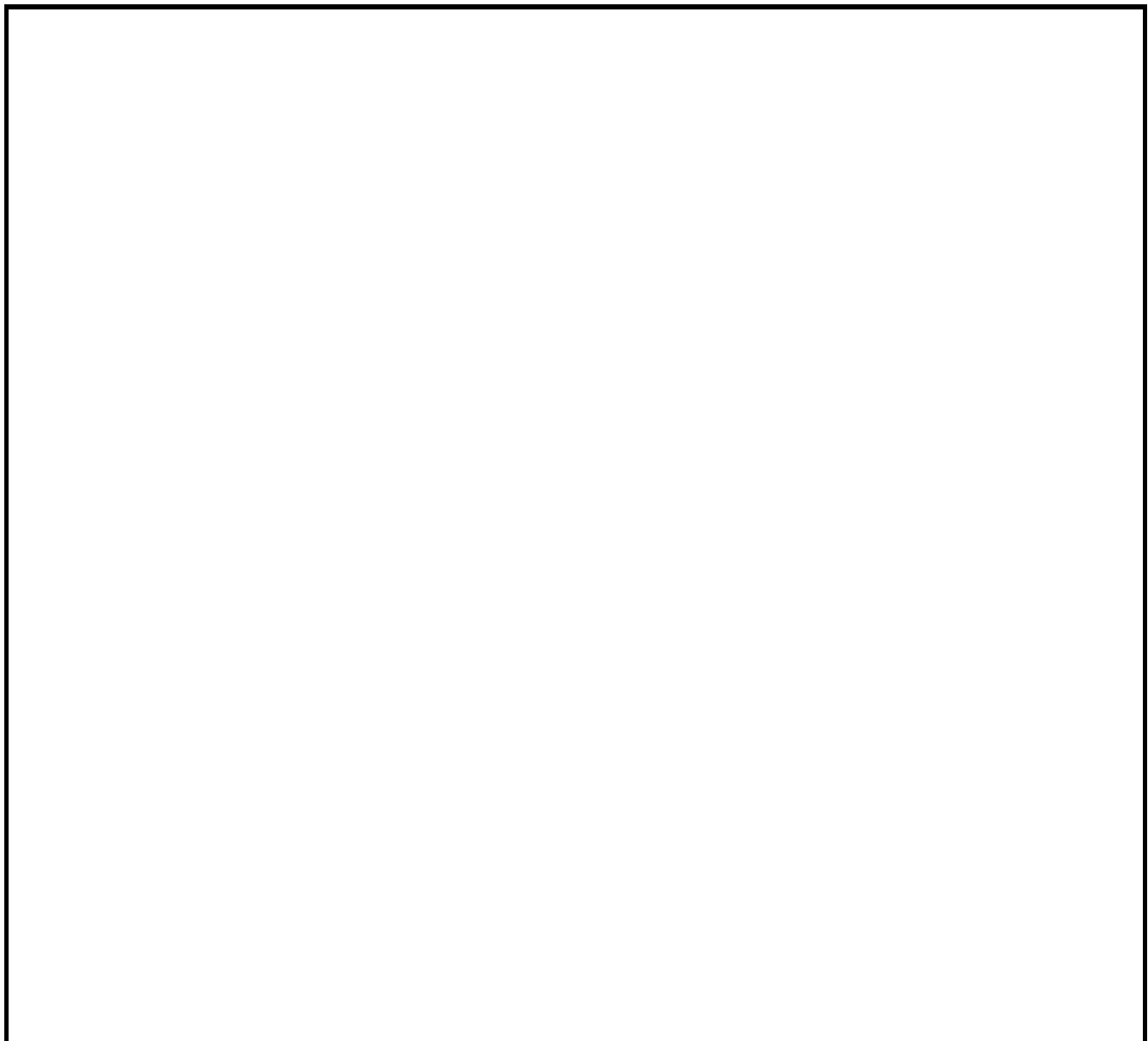
### Associateships

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.

### Advanced Certificate in Professional Computational Science

The Advanced Certificate in Professional Computational Science is designed for private and public industry professionals as well as graduate students who wish to learn professional and technical computational skills in their fields to include tools available for scientific application development (particularly those targeted as parallel and distributed systems), scientific visualization and database query applications, simulation and modeling packages, computational templates such as Matlab and Maple, and the choice of appropriate hardware resources for different classes of computational problems.

The advanced certificate requires 12 units to include Computational Science 526, 601, 626, 670.



# Computer Science

In the College of Sciences

**OFFICE: Geology/Mathematics/Computer Science 413**

**TELEPHONE: 619-594-6191**

**<http://www.cs.sdsu.edu>**

## Faculty

Leland L. Beck, Ph.D., Professor of Computer Science,  
Chair of Department

John L. Carroll, Ph.D., Professor of Computer Science  
John D. Donald, Ph.D., Professor of Computer Science, Emeritus  
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  
Marie A. Roch, 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  
Robert A. Edwards, Ph.D., Assistant Professor of Computer Science  
Tao Xie, 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: artificial intelligence, databases, high performance computing, web application, 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> along with the \$55 application fee.

All applicants must submit admissions materials to SDSU Graduate Admissions.

Refer to section on Admission to Postbaccalaureate and Graduate Study in this bulletin for further details.

## Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

## 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.
2. 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. A 600-level electrical engineering course or one of the mathematics courses listed below in the ALC area of study may replace one 600-level computer science course.
- 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.

## Computer Science

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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. A 600-level electrical engineering course or one of the mathematics courses listed below in the ALC area of study may replace one 600-level computer science course.
- b. At least one course from four of the following five areas of study: PFL, OSA, ALC, ISR, and 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. Further information is available on the department Web site.

Full-time international students on Plan B who have completed all their coursework must take at least two qualifying examinations per semester until they have passed all but one.

### Areas of Study

**(PFL) Programming and Formal Languages:** Computer Science 520, 524, 532, 533, 534, 535, 537, 540, 620, 632, 635, 636.

**(OSA) Operating Systems and Architecture:** Computer Science 572, 574, 670, 674; Electrical Engineering 679.

**(ALC) Algorithms and Complexity:** Computer Science 558, 562, 600, 660, 662, 664; Mathematics 525, 542, 625, 626, 667, 693A, 693B.

**(ISR) Intelligent Systems and Robotics:** Computer Science 550, 552, 553, 556, 559, 581, 582, 650, 652, 656, 657, 682.

**(DSW) Distributed Systems and Web Technology:** Computer Science 514, 551, 561, 576, 580, 615, 651, 676, 678, 683, 689.

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# Criminal Justice and Criminology

In the School of Public Affairs 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 / FAX: 619-594-1165**

## Faculty

Stuart D. Henry, Ph.D., Professor of Public Affairs,  
Director of School of Public Affairs

Bohdan Kolody, Ph.D., Professor of Sociology

Jana L. Pershing, Ph.D., Professor of Sociology

Ruth Xiaoru Liu, Ph.D., Professor of Sociology

Louis M. Rea, Ph.D., Professor of Public Affairs,  
(M.P.A. Graduate Coordinator)

Sheldon X. Zhang, Ph.D., Professor of Sociology

Jeffrey S. McIlwain, Ph.D., Associate Professor of Public Affairs

Dana M. Nurge, Ph.D., Associate Professor of Public Affairs,  
(Graduate Coordinator)

Sherry Ryan, Ph.D., Associate Professor of Public Affairs

Paul J. Kaplan, Ph.D., Assistant Professor of Public Affairs

Michael A. McCall, Ph.D., Assistant Professor of Sociology

Alan C. Mobley, Ph.D., Assistant Professor of Public Affairs

## 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 Affairs 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> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Public Affairs.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### School of Public Affairs

The following materials should be mailed or delivered to:

School of Public Affairs/  
Master of Criminal Justice and Criminology  
(Attention: Dr. Dana M. Nurge)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4505

- (1) Two letters of reference;
- (2) 500-word essay describing your professional and educational goals.

## 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 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 or project (Plan A) or comprehensive written examination (Plan B).

### Graduate Program (30 units total)

Substantive Courses (15 units required):

CJ 601	Seminar in the Administration of Criminal Justice (3)
CJ 602	Seminar in Comparative Criminal Justice System (3)

## ***Criminal Justice and Criminology***

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CJ 603 Seminar in Community and Restorative Justice (3)

CJ 604 Seminar in Criminal Justice and Urban Administration (3)

CJ 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)

Electives (3 units required):

CJ 543 Community Resources in Criminal Justice (3)

CJ 570 Organized Crime: Domestic and International Perspectives (3)

PA 660 Administration and Public Policy Development (3)

POL S 577 Principles of International Law (3)

SOC 601 Advanced Social Theory: Core Course (3)

SOC 796\* Field Practicum (3) Cr/NC

WMNST 572 Women and Violence (3)

Culminating Experience (3 units required):

Plan A:

CJ 799A Thesis (3) Cr/NC/RP

Plan B:

CJ 797 Research in Criminal Justice (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 Public Administration section of this bulletin and under the other appropriate headings.

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### Dance

Refer to "Music and Dance" in this section of the bulletin.



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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

Kangoh Lee, Ph.D., Professor of Economics, Chair of Department

Renatte K. Adler, Ph.D., Professor of Economics

Catalina Amuedo-Dorantes, Ph.D., Professor of Economics

Roger S. Frantz, Ph.D., Professor of Economics

James B. Gerber, Ph.D., Professor of Economics

Shoshana A. Grossbard, Ph.D., Professor of Economics

Mark A. Thayer, Ph.D., Professor of Economics

Edmund M. Balsdon, Ph.D., Associate Professor of Economics

Jennifer Imazeki, Ph.D., Associate Professor of Economics

Hisham S. Foad, Ph.D., Assistant Professor of Economics

Christiana E. Hilmer, Ph.D., Assistant Professor of Economics

(Graduate Adviser)

Michael J. Hilmer, Ph.D., Assistant Professor of Economics

Phacharaphot Nuntramas, Ph.D., Assistant Professor of Economics

Thitima Puttitanun, Ph.D., Assistant Professor of Economics

Quazi Shahriar, 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

Students applying for admission to the Master of Arts program in economics should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Economics.

## Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions

Enrollment Services

San Diego State University

San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

## Department of Economics

The following materials should be mailed or delivered to:

Graduate Admissions Coordinator

Department of Economics

San Diego State University

5500 Campanile Drive

San Diego, CA 92182-4485

- (1) Two letters of recommendation;

- (2) A personal statement of no more than 750 words that describes why you wish to pursue graduate study in economics.

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 32 units. Each program must include Economics 630, 631, 640, 640L, 641, 641L, 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

## Economics

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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 Development and Planning:  
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 Public Economics: Urban and Regional  
Economics (3)

#### **At least one course selected from the following:**

- 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 Geography: Urban and  
Regional Policy (3)
- GEOG 685 Advanced Quantitative Methods in Geography (3)
- GEOG 780 Seminar in Techniques of Spatial Analysis (3)

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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, PreK-12 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, the Master of Science degree in rehabilitation counseling, and the Educational Specialist degree in school psychology.

The College of Education offers advanced graduate study leading to doctoral degrees in education: the Doctor of Education (Ed.D.) and the Doctor of Philosophy (Ph.D.). The Ed.D. in educational leadership is offered independently with concentrations in PreK-12 school leadership and community college/postsecondary leadership. Authorized by Senate Bill 724 passed in 2005, the Ed.D. was designed as a professional degree for aspiring school and community college educational administrators to develop advanced knowledge and skills by conducting research on significant problems of practice that have regional and national implications. PreK-12 and community college practitioners team with College of Education faculty in all aspects of the program.

A second Ed.D. program is offered jointly with the University of San Diego in educational technology and teaching and learning. Currently, no students are being admitted to this program.

The Ph.D. degrees are offered jointly with collaborating universities that emphasize theory and research underlying educational practice as preparation for positions in higher education, school, and other public and private organizations. The Doctor of Philosophy (Ph.D.) in education with an emphasis on democratic schooling and social justice is offered jointly with Claremont Graduate University. Inquiries should be addressed to SDSU/CGU Ph.D. program office at 619-594-6544.

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.

### Admission to Doctoral Study

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the College of Education (refer to the appropriate degree section for the address to submit additional information).

#### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

#### Doctor of Philosophy (Ph.D.) Degree in Education

The following materials should be submitted by January 31 for the fall semester to:

Joint Ph.D. Program in Education  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1105

- (1) Program application;
- (2) Three letters of recommendation;
- (3) A 1000 word personal statement;
- (4) GRE – a recent score;
- (5) Official transcripts;
- (6) Resume.

#### Doctor of Education (Ed.D) Degree in Educational Leadership

The following materials should be mailed or delivered to the specialization:

Ed.D. Program Director, PreK-12  
Department of Educational Leadership  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1109

OR

Ed.D. Program Director, Community College  
Department of Administration, Rehabilitation,  
and Postsecondary Education  
San Diego State University  
3590 Camino del Rio North  
San Diego, CA 92108-1716

- (1) Program application;
- (2) Three letters of recommendation;
- (3) Professional resume;
- (4) Statement of purpose;
- (5) Examples of professional and/or academic writing;
- (6) Employer statement of nomination or support.

#### Educational Specialist (Ed.S.) Degree in School Psychology

The following materials should be mailed or delivered to:

Department of Counseling and School Psychology  
Attention: School Psychology Program Director  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1179

- (1) Vita or resume;
- (2) Personal statements and essays (see Web site for essay questions).
- (3) At least three letters of recommendation;
- (4) Supplemental material to enhance evaluation of your academic, professional, and cross-cultural readiness (e.g., course papers or projects, an evaluation from work, a brief videotape of you working with children);
- (5) Students must obtain the California certificate of clearance prior to beginning the field experience sequence in the fall semester of their first year;
- (6) The California Basic Educational Skills Test (CBEST) is required by the State of California prior to beginning the sequence of studies. The program does **not** require passing the CBEST for

## Education

admission. It must be passed, however, prior to consideration for the award of a credential. Out-of-state applicants may take the CBEST in their first semester;

(7) Transcripts of all collegiate work:

- a. Undergraduate major or substantial coursework in behavioral sciences (e.g., psychology, sociology, social work), education (or liberal studies), child development, and/or ethnic studies. The following courses are especially recommended: general psychology, developmental psychology,

research and statistics in behavioral sciences, learning or cognition, social psychology or sociology, multicultural or culture-focused studies, and psychological or educational testing and measurement.

- b. A minimum 2.85 grade point average (when A equals 4) in the last 60 semester (90 quarter) units or in the major. Applicants whose grade point averages fall below the university standard of 2.85 **must** supply additional data to support consideration for admissions.

### Section I. Doctoral and Educational Specialist Programs

#### Doctor of Philosophy Degree in Education

(Major Code: 08011)

<http://edweb.sdsu.edu/doc>

#### Admission to the Degree Curriculum

The Doctor of Philosophy (Ph.D.) program in education is offered jointly by the faculty in the College of Education at San Diego State University (SDSU) and the faculty in the School of Educational Studies at Claremont Graduate University (CGU). The mission of the Ph.D. program in education is to develop scholars who are committed to research on democratic schooling, social justice and equal educational outcomes for all students, and the improvement of educational systems serving diverse communities. Such scholars are capable of providing leadership in building a more democratic society through responsive systems of education and making sense of complex data. The Ph.D. program emphasizes issues in educating a multicultural society. It prepares students for the challenges and opportunities, which such diversity creates. While maintaining a focus on diversity, the student pursues an individualized program of study supervised by faculty members from both SDSU and CGU.

In addition to meeting the general requirements for admission to both institutions with classified graduate standing as outlined in their current bulletins, students must be recommended for admission by the program's admissions committee on the basis of excellence as evidenced in the following materials:

1. Program application;
2. An earned master's degree in education or a related field from an accredited institution with a cumulative GPA of 3.0 or above;
3. Sufficient experience pertinent to the mission of the program to benefit from the program;
4. Acceptable scores on the Graduate Record Examination (GRE);
5. Three letters of recommendation attesting to the academic and professional skills necessary for doctoral studies;
6. A personal statement of purpose reflecting the skills, experiences, and dispositions appropriate for the program;
7. Professional resume; and
8. A personal interview with the program director or admissions committee.

Students seeking admission to the SDSU/CGU Ph.D. program in education can obtain application materials online at <http://edweb.sdsu.edu/doc/application.htm>. Any questions about the program should be directed to Dr. Rafaela M. Santa Cruz, director of the program.

#### Advancement to Candidacy

Advancement to candidacy occurs when the institutional form signed by the dissertation committee approving the dissertation proposal is processed. It is CGU policy that the oral defense of the dissertation not be scheduled sooner than six months after advancement to candidacy.

#### Specific Degree Requirements for the Ph.D. Degree in Education

- 72 semester units (minimum) of coursework (24 units at San Diego State University, 24 units at Claremont Graduate University, and 24 units transferred from master's degree);
- Two research tools (one at each institution);
- Four written qualifying examinations (two at each institution);
- The oral qualifying examination;
- A written dissertation;
- The dissertation defense.

A minimum of 48 semester units of residency, 24 at each institution, is required before a student is eligible to schedule the oral qualifying examination. In the interest of establishing an effective working relationship with faculty at both SDSU and CGU, 12 of the student's first 24 units must be taken at CGU.

#### Research Tools

Two research tools are required. Their purpose is to assure proficiency in research methodologies including those most likely to be used in the dissertation project. One research tool in intermediate quantitative methods is satisfied by receiving a grade of B or better in ED 820 at SDSU. The second research tool may be completed through course work in advanced quantitative methods or in other research methods with a grade of B+ or better, by proving competency in a second language relevant to your doctoral research, or by special arrangement with a faculty member at CGU.

#### Written Qualifying Examinations

Four written qualifying examinations are required. While they most often take the form of papers, a literature review on research interests, or take-home examinations, other possibilities may also be explored in consultation with faculty. Written evidence of conference presentations or published materials demonstrating expertise in an area of research, proposals for external funding, videotapes, computer-based exhibits, a school or school district plan, a program evaluation, a syllabus, course materials and evaluations for a college course, or such other products as may appropriately demonstrate the student's competence may serve as written qualifying examinations with a supervising faculty member's approval.

### Oral Qualifying Examination

The oral qualifying examination is scheduled when all coursework, including research tools, has been completed and all four written qualifying examinations have been approved. Through the oral qualifying examination the student is called upon to demonstrate a range and depth of understanding of the field of education. The examination serves to determine whether or not the student has made satisfactory progress in developing capacities for understanding diversity, critical analysis, systemic change for performance improvement, community transformation, effective educational practice, and original research to be advanced to candidacy for the doctorate. The oral is a discussion and examination of the work completed in the Ph.D. program to this point, including but not limited to the work demonstrated in written qualifying examinations.

### Dissertation

All doctoral students will complete a research-based dissertation. The dissertation will typically focus on (a) understanding diversity and its implications for education, (b) critically analyzing and developing educational policy, (c) engaging in systemic organizational change that improves performance and quality of life for all, (d) applying theory and research-based knowledge in transforming communities, or (e) using effective educational practices, including tools available through technology, to transform organizations. The primary goal of the dissertation is contributing to the knowledge base in education.

### Dissertation Defense

The program coordinator schedules the dissertation defense upon notification by the dissertation committee that the dissertation draft is approved. The dissertation committee conducts the defense and may request revisions to the final dissertation manuscript during the oral defense.

### Performance Expectations

Joint doctoral students must maintain a 3.0 GPA to be in good academic standing. Students must be continuously enrolled for the duration of their program by taking classes at either institution. Once required coursework at both SDSU and CGU has been completed, the student is required to maintain continuing registration at CGU through completion of all degree requirements.

### 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: Rafaela M. Santa Cruz  
 Faculty: Allen, Alvarado, Basom, Bezuk, Bober, Bresciani, Cadiero-Kaplan, Capello, Cohn, Degeneffe, Dodge, Espinosa, Evans, Farnan, Fearn, Fisher, Frey, Gallego, Gibson, Graves, Hall, Hampton, Hoffman, Ingraham, Jacobs, J. F. Johnson, J. R. Johnson, Jones, Kelly, Kitano, Lapp, Mason, Mathison, McFarlane, Moss, Ochoa, Pang, Philipp, Pumpian, Ritchie, Robinson-Zanartu, A. Rodriguez, J. Rodriguez, P. Ross, Rossett, Saba, Santa Cruz, Sax, Uline, Wang, Zozakiewicz

#### Claremont Graduate University

Director: Barbara DeHart  
 Faculty: Adam, Arguelles, DeHart, Drew, Dreyer, Jimenez-Hernandez, Paik, Perez, Perkins, Poplin, Regan, Robb, D. D. Smith, D. G. Smith, Thompson

## Doctor of Education Degree in Educational Leadership

<http://eddleaders.sdsu.edu>

### Admission to the Degree Curriculum

The Doctor of Education (Ed.D.) degree in educational leadership prepares leaders capable of initiating change and creating diverse educational institutions for the region's P-14 student population. It is designed as a professional degree for PreK-12 school and community college/postsecondary leaders who will develop advanced leadership and research skills related to their own institutional settings. The program is committed to developing reflective leaders and change agents for complex educational organizations in diverse multicultural settings. Emphasizing theory, research, and practice, the program provides an opportunity for candidates to work in learning communities with faculty and practitioners to develop a deeper understanding of themselves as educational leaders and to develop the knowledge and skills needed to improve student learning. The program is offered through the Department of Educational Leadership and the Department of Administration, Rehabilitation, and Postsecondary Education. There are two concentrations: PreK-12 school leadership and community college/postsecondary leadership.

A cohort of students will be admitted by May for classes starting in the fall semester.

In addition to meeting the general admission requirements, students must be recommended for admission by the program's graduate admissions committee on the basis of standards of excellence as evidenced in the following materials:

1. An earned baccalaureate degree and master's degree or equivalent from accredited institutions of higher education with a cumulative GPA in upper division and/or graduate study of 3.0 or above;
2. Sufficient preparation and experience pertinent to educational leadership to benefit from the program;
3. Submission of Graduate Record Examination (GRE) scores on the GRE tests;
4. Demonstrated leadership potential and skills including successful experience in schools, postsecondary education, community colleges, related fields and/or policy leadership;
5. Demonstrated academic excellence, problem-solving ability, and an interest in critically assessing and bringing about improvements within current educational policies and practices;
6. Three confidential letters of support attesting to the leadership ability and scholarship of the candidate;
7. A written statement of purpose reflecting understanding of the challenges facing the public schools or community colleges/institutions of higher education in California;
8. Professional resume;
9. Examples of professional and/or academic writings;
10. A statement of support for the candidate's doctoral studies from her/his employer or, in the cases where this is not provided, an indication of the candidate's plan for meeting the demands of the program and his/her professional responsibilities;
11. A personal interview with the Admissions and Standards Committee including a written response to a prompt provided by the committee.

Meeting the minimum requirements qualifies an individual for consideration, but does not guarantee admission to the program. Admission will be granted on a competitive basis.

### Advancement to Candidacy

The written qualifying examination will occur at the end of the fourth semester in the program. The examination will cover the three areas of the program: (a) leadership core courses, (b) research methodology courses, and (c) concentration courses completed up to that time. The structure of the examination will be developed by the executive committee and administered by the program directors.

Once the doctoral student successfully completes the qualifying examination and has successfully completed all required courses at that stage in the program, the doctoral student will be advanced to candidacy.

### Specific Requirements for the Ed.D. in Educational Leadership

#### Core Curriculum Requirements (27-30 units)

- ED 815 Re-Thinking Leadership (3)
- ED 836 Research and Writing Support (6-9) Cr/NC
- ED 840 Seminar in Leadership in a Diverse Society (3)
- ED 850 Seminar in Quantitative Methods of Inquiry (3)
- ED 851 Seminar in Qualitative Methods of Inquiry (3)
- ED 855 Seminar in Leadership for Developing Educational Systems (3)
- ED 860 Seminar in Leadership and Educational Change (3)
- ED 885 Seminar in Educational Program Planning and Evaluation (3)

#### Dissertation (12 units)

- ED 899 Doctoral Dissertation (12) Cr/NC/RP

#### Concentration in PreK-12 School Leadership (18 units)

##### (Major Code: 08272)

- EDL 720 Human Resource Development in PreK-12 Educational Organizations (3)
- EDL 755 Governance and Policy Development in PreK-12 Learning Organizations (3)
- EDL 760 Practicum in PreK-12 Educational Organizations (3) Cr/NC/RP
- EDL 830 Leadership for Learning (3)
- EDL 880 Seminar in Topics in Educational Leadership (6)

#### Concentration in Community College/Postsecondary Leadership (21 units)

##### (Major Code: 08273)

- ARP 727 Emerging Issues in Postsecondary Educational Leadership (3)
- ARP 760 Internship in Educational Leadership (3) Cr/NC/RP
- ARP 801 Seminar in Community College History and Development (3)
- ARP 810 Seminar in Community College Law and Finance (3)
- ARP 811 Seminar in External and Partnerships for Community Colleges (3)
- ARP 812 Seminar in Budget and Resource Management in Community Colleges (3)
- ARP 813 Strategic Planning in Community Colleges (3)

A minimum of 30 units or equivalent of residency is required before a student is eligible to take the qualifying examination.

The program is designed to be completed in three calendar years including summer sessions. Classes are held during the late weekday afternoons/evenings, on weekends, and during the summer to accommodate the schedules of working adults. Some classes include a blend of in-class and distance learning technologies.

### Dissertation

All doctoral students will complete a rigorous research-based dissertation integrating theory and research in the study of educational practice. The dissertation will include the results of the doctoral student's independent research and will typically focus on an examination of (a) an educational issue, (b) a practice or program, (c) an educational policy, reform, or improvement, or (d) implementation studies within an educational organizational. Most dissertations will be studies undertaken in the local context, having the potential to contribute to solutions of educational problems. Dissertations will use a range of qualitative and quantitative research and evaluation methods. The dissertation will present the results of the doctoral student's independent investigation in a manner that contributes both to professional knowledge in education and to the improvement of educational practice.

The primary goal of the dissertation is to generate knowledge that contributes to the understanding of educational practices, policies, reforms or improvements. Doctoral students who have not completed their dissertation after 12 semester units, must maintain continuous enrollment in the university by registering for at least one unit per semester.

### Final Examination (Oral)

The dissertation committee, consisting of two university faculty and at least one community member, will conduct a final oral examination during which the doctoral student defends the dissertation. The dissertation defense will address the theoretical and conceptual background, relevant literature, data collection techniques, data analysis strategies, and results and implications concerning the question(s) studied.

### Additional Requirements

Doctoral students who have not earned the professional administrative credential will be able to do so while enrolled in the Ed.D. program. PreK-12 doctoral students must complete additional practicum activities to demonstrate their competence in each of the principles of administrative practice specified by the California Commission on Teacher Credentialing.

All doctoral students are expected to complete an internship as part of their concentration. The internship (3 units) will typically occur at the end of the doctoral student's coursework and will be congruent with the doctoral student's professional goals.

### Performance Expectations

Doctoral students must maintain a 3.0 GPA to be in good standing. Doctoral students who have a grade point average below 3.0 in two successive terms will be disqualified from the program. They must meet all the requirements of graduate doctoral students outlined in the *Graduate Bulletin*. In addition, doctoral students who are enrolled in the professional administrative credential must meet the standards set forth in the California Commission on Teacher Credentialing approved program documents submitted by SDSU.

Doctoral students who fail to make satisfactory academic progress may be officially disqualified from the university in writing after consultation with the executive committee. A doctoral student may be disqualified because of unsatisfactory academic progress only after a careful review and written recommendation by the Ed.D. program faculty. To ensure that a decision to disqualify a doctoral student from the program is just, basic due process requirements will be met, including an opportunity for appeal by the doctoral student following the guidelines in the *Graduate Bulletin*. A doctoral student who has been disqualified is considered to have been terminated from the university and will not be allowed to continue in the program, enroll in courses, or register again without readmission.

### Faculty

The following faculty are available for teaching and serving on doctoral committees:

#### Administration, Rehabilitation and Postsecondary Education

Bresciani, Degeneffe, Hampton, Jacobs, McFarlane, Piland, Sax

#### Educational Leadership

Basom, Brown, Cohn, Johnson, Meno, Pumpian, Uline

## Doctor of Education Degree (SDSU/USD)

(Major Code: 08011)

<http://www.sandiego.edu/academics/soles/acadprog/doctoral/jointdocprog>

No new students are being admitted to this program until further notice.

### Admission to the Degree Curriculum

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://www.sandiego.edu/academics/soles/acadprog/doctoral/jointdocprog>. Not all fields 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 fields 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. Applicants must submit original 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.

### 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 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 a faculty adviser, students will develop an area of study directly related to their educational objective.

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, 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.

If students do not graduate at the end of the spring semester of their fifth year in the program and instead plan to graduate during the following summer, they must enroll in one dissertation unit at USD and petition both universities for graduation. Any students not graduating before the beginning of the fall semester of their sixth year in the program must enroll for three dissertation units at USD up until and including the semester of planned graduation. They must have applied for graduation at both universities the semester they actually graduate.

### 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: Allen, Basom, Bezuk, Bober, Bresciani, Cadiero-Kaplan, Cappello, Cohn, Degeneffe, Dodge, Espinosa, Evans, Farnan, Fearn, Fisher, Frey, Gallego, Graves, Hall, Hampton, Hoffman, Ingraham, Jacobs, J. F. Johnson, J. R. Johnson, Jones, Kelly, Kitano, Lapp, Lewis, Mason, Mathison, McFarlane, Moss, Ochoa, Pang, Philipp, Pumpian, Ritchie, Robinson-Zanartu, A. Rodriguez, J. Rodriguez, P. Ross, Rossett, Saba, Santa Cruz, Sax, Uline, Wang, Zozakiewicz

#### University of San Diego

Director: Jerome Ammer

Faculty: Alexandrowicz, Barnes, Collins, Cordeiro, Dantas, Donmoyer, Galloway, Gelb, Getz, Hubbard, Infantino, Inoue, Monroe, Quezada, Rowell, Schneider, Sisserson, Zyglicynski

## Educational Specialist Degree In School Psychology

### General Information

The Educational Specialist (Ed.S.) degree in School Psychology (**Major Code: 20013**), offered in the Department of Counseling and School Psychology, is an integrated graduate-professional program designed to prepare school psychologists who apply educational, psychological, and social and cultural foundations to create and engender a vision of educational equity in the public schools. The program prepares school psychologists with (a) ecological and systems perspectives by which to consider problem situations in the schools, (b) the cultural competencies to serve the multicultural populations of public schools, (c) the knowledge and skills to serve both general and special education populations, and (d) the skills to function as data-based change agents and consultants in the schools, providing a broad range of culturally-appropriate assessment-intervention services. A scientist-practitioner training model serves as a guide to the preparation of these data-based problem-solvers who will be prepared to serve as school psychologists in the public schools.

The Ed.S. program requires completion of an integrated sequence of coursework, supervised field experiences, and research across a minimum of four years of full-time study (or part-time study to result in no more than six years). The program is organized in seven curricular areas delineated below. During the first two full-time years, students may complete the requirements for the Master of Arts in Education with a Concentration in Counseling.

At the end of the third full-time year, students stand for review and recommendation for the School Psychology Internship Credential awarded by the California Commission on Teacher Credentialing. In the last year of the program, students must complete a 1200 hour internship in the public schools, enroll in the accompanying professional development seminar, and engage in the development of a culminating professional portfolio. Satisfactory completion of all program requirements results in recommendation for the Ed.S. degree and the Pupil Personnel Services Credential in School Psychology. The credential authorizes the holder to function as a school psychologist in preschool through high school settings.

Typically, students enter the program with a bachelor's degree and complete the requirements in the program's seven areas as listed below. Students who hold master's or doctoral degrees in closely related fields may complete the program on a "credential only" basis (**Credential Code: 00804**) or may seek the Ed.S. degree. All students must follow the regular application procedures and requirements. After admission and in consultation with the adviser, students with graduate degrees may develop petitions for waiver of comparable courses and a proposed sequence of study which are reviewed by the governing program faculty for approval prior to implementation.

### Accreditation

The school psychology program is accredited by the California Commission on Teacher Credentialing and approved by the National Association of School Psychologists (NASP). National accreditation facilitates eligibility for National Certification in School Psychology (NCSP), however, does **not** guarantee certification, licensure, or credentialing 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.

### Financial Assistance

The school psychology program has a long (since 1986) and successful record of obtaining federal funding for personnel preparation projects which provide financial support for selected full-time students. These projects are time-specific, applicants and students are referred to the program Web site and office for current information. Additionally, graduate assistantships are available to a limited number of students. The Department of Counseling and School Psychology sponsors a 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. First year students are eligible to apply for the department's Gertrude Bell Scholarship. Other forms of financial assistance administered by the university are presented elsewhere in this bulletin.

### Admission

Applications are considered only once a year with review of applications beginning on January 15. We urge applicants to submit their applications by that date. The application requires three steps that must be completed simultaneously:

- (1) All applicants must apply to the university online at <http://www.csumentor.edu>.
- (2) The following materials should be submitted as a complete package to:
  - Graduate Admissions
  - Enrollment Services
  - San Diego State University
  - San Diego, CA 92182-7416
  - a. Official transcripts (in sealed envelopes) from all postsecondary institutions attended;
  - b. GRE scores (official notification);
  - c. If medium of instruction was in a language other than English, official notification of TOEFL score plus Test of Written English.
- (3) The following materials should be submitted as a complete package to:
  - School Psychology Program Admissions Committee
  - Department of Counseling and School Psychology
  - College of Education, San Diego State University
  - 5500 Campanile Dr.
  - San Diego, CA 92182-1179
  - a. Completed program application checklist;
  - b. Vita or resume;
  - c. Personal statements and essays (see Web site or contact program for essay questions);
  - d. At least three letters of recommendation;
  - e. The California Basic Educational Skills Test (CBEST) (Out-of-state applicants may take the CBEST in their first semester);
  - f. Supplemental material to enhance evaluation of your academic, professional, and cross-cultural readiness (e.g., course papers or projects, an evaluation from work, a brief videotape of you working with children). Applicants whose grade point averages fall below the university standard of 2.85 in the last 60 semester units or in the major MUST supply additional data in support of their academic readiness;
  - g. Program Application Affidavit. Students must obtain the California Certificate of Clearance prior to beginning the field experience sequence in the fall semester of their first year.

Admission is a two-phase process: (1) completion of the application portfolio and (2) small group interviews using authentic assessment activities. Successful applicants will demonstrate academic, professional, and cross-cultural readiness for this demanding graduate-professional program. It is strongly recommended that applicants have an undergraduate major or substantial coursework in behavioral sciences (e.g., psychology, sociology, social work), education (or liberal studies), child development, and/or ethnic studies prior to entering the program. The following courses are especially recommended: general psychology, developmental psychology, research and statistics in behavioral sciences, learning or cognition, social psychology or sociology, multi-cultural or culture-focused studies, and psychological or educational testing and measurement.

Application materials become the property of the program and will not be returned to the applicant. No minimum set of qualifications in any way guarantees admission. Additional information about the program can be found at <http://edweb.sdsu.edu/CSP/programs/sp>.

### 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 who holds classified standing may be advanced to candidacy for the M.A. degree with Concentration in Counseling after completing at least 12 units of coursework on the official M.A. program of study with a minimum grade point average of 3.0 (B). Advancement to candidacy for the Ed.S. degree occurs when general requirements have been met and the student has earned a minimum grade point average of 3.0 (B) in at least 30 units listed on the official Ed.S. program of study.

### Specific Requirements for the Educational Specialist Degree in School Psychology

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 demonstrate and document, in a comprehensive culminating portfolio, the integration and application of theory, research, and skills appropriate to the practice of school psychology. It is expected that the student will complete the portfolio concurrently with enrollment in CSP 780, Internship.

### Curricular Requirements for the Ed.S. in School Psychology

The school psychology program demands a specific sequence of courses and supervised experiences across seven curricular areas. The student, in collaboration with the adviser, must file the program's sequence of study form prior to taking courses to ensure that all requirements are fulfilled in the correct sequence. The student entering with a bachelor's degree must complete a minimum of 76 units in the seven areas of the M.A./Ed.S. program, with course selection in collaboration with the adviser and consistent with the program structure, as indicated below. Students admitted to the Ed.S. or credential-only programs, with a graduate degree in a closely related field, may have completed graduate coursework consistent with the seven areas of the school psychology program. Such students may petition for course waiver(s) by presenting documentation of successful completion of comparable courses and attainment of associated knowledge and competencies; however, (a) a minimum of 46 units must be completed in the SDSU Ed.S. program and (b) the full-complement of knowledge and skills must be demonstrated in each of the seven areas prior to recommendation for the Ed.S. degree and/or credential. Courses marked with an asterisk may be applied to the 30-unit M.A. in Education with Concentration in Counseling.

1. Professional School Psychology (a minimum of 12 units)  
CSP 752 Seminar and Practicum:  
School Psychology (3-6) Cr/NC  
And a minimum of six units from the following:  
CSP 710A Professional Seminar (3)  
CSP 710B Professional Seminar (3)  
CSP 730 Fieldwork in Counseling (2-6) Cr/NC  
Or other course(s) in the department or in a related field approved by adviser.



2. Research and Program Evaluation (a minimum of 12 units)
  - \*ED 690 Methods of Inquiry (3)
  - \*ED 795A Seminar (3)
  - CSP 760 Advanced Seminar in School Psychology (3)
 And a minimum of three units from the following:
  - CSP 745 Program Development & Evaluation in Pupil Services (3)
  - CSP 770 Advanced Seminar in Counseling (3)
  - CSP 790A Specialist's Project in School Psychology (3) Cr/NC/RP
 Or other course(s) in the department or in a related field approved by adviser.
  
3. Social and Cultural Foundations (a minimum of six units)
  - \*CSP 622A Ecosystems Assessment-Intervention I: Students (3)
 And a minimum of three units from the following:
  - CSP 610B Determinants of Human Behavior: Social and Cultural (1-3)
  - \*CSP 615 Seminar in Multicultural Dimensions in Counseling (3)
 Or other course(s) in the department or in a related field approved by adviser.
  
4. Educational Foundations (a minimum of 10 units)
  - \*CSP 622B Ecosystems Assessment – Intervention II: Schools (3)
 And a minimum of seven units from the following:
  - CSP 740 Practicum (1-6) Cr/NC
  - SPED 651 Legislation, Leadership, and Management for Special Education Services (3)
 Or other course(s) in the department or College of Education approved by adviser.
  
5. Psychological Foundations (a minimum of nine units)
  - CSP 610D Determinants of Human Behavior: School Learning (3)
 And a minimum of six units from the following:
  - \*CSP 610C Determinants of Human Behavior: Development (3)
  - \*CSP 610E Determinants of Human Behavior: Biological (3)
 Or other course(s) in the department or in a related field approved by adviser.
  
6. Assessment-for-Intervention (a minimum of 15 units)
  - CSP 746 Dynamic Assessment & Mediated Interventions (3)
 And a minimum of 12 units from the following:
  - \*CSP 623 Ecobehavioral Assessment-Intervention (3)
  - CSP 641 Psychometrics in Counseling and School Psychology (1)
  - 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 Cognitive Assessment-Intervention (3)
 Or other course(s) in the department or in a related field approved by adviser.
  
7. Interventions (a minimum of 12 units)
  - CSP 680 Theory and Process of Consultation (3)
 And a minimum of nine units from the following:
  - \*CSP 600 Cross-Cultural Counseling Communication Skills (2)

- \*CSP 600L Cross-Cultural Counseling PrePracticum (1) Cr/NC
  - \*CSP 662B Counseling Interventions with Children and Adolescents: School Counseling and School Psychology (3)
  - CSP 670 Theory and Process of Group Counseling (3)
  - CSP 689 Family Counseling in the Schools (1)
  - CSP 762 Prevention, Crisis Intervention, and Conflict Resolution in Schools (3)
- Or other course(s) in the department or in a related field approved by adviser.

### Additional Requirements for the School Psychology Internship Credential

Candidates for the School Psychology Internship Credential must (a) hold the California Certificate of Clearance, (b) have passed the CBEST, (c) have completed one year of full-time study (residency) including two semesters of CSP 752 Seminar and Practicum in School Psychology, (d) have completed at least 500 hours of supervised field experiences in the schools, and (e) receive the formal recommendation of the school psychology faculty for the internship credential. Recommendation for the internship credential requires completion of all coursework with a 3.0 (B) average, with at least a B- (or Cr in Cr/NC courses) in each course, except for CSP 760 Advanced Seminar in School Psychology and/or CSP 790A Specialist's Project, which are completed in conjunction with internship.

### Additional Requirements for the School Psychology Credential

In addition to the requirements for the Ed.S. in School Psychology, candidates for the California Pupil Personnel Services Credential with Specialization in School Psychology must complete: (a) a 1200 hour internship in the public schools as the culminating supervised field experience, (b) demonstrate and document competency in each of the seven curricular areas of the program, and (c) receive the formal recommendation of the school psychology faculty. Internship is usually completed as a full-time year-long experience; under special circumstances it may be possible to extend the internship on a half-time basis across two years. Interns will enroll in CSP 780 Internship: School Psychology (2-12) throughout the duration of their internship.

### Performance Expectations

Students must maintain the university minimum 3.0 grade point average with no grade lower than B-. Falling below a minimum 3.0 GPA automatically places a student on administrative academic probation. Such academic probation for two semesters or three grades of B- or lower (including NC), regardless of GPA, are grounds for dismissal from the program and a faculty review will ensue.

Adherence to the National Association of School Psychologists Principles for Professional Ethics is a mandatory requirement. Academic honesty is expected in all courses and supervised experiences (see Part One of this bulletin). Students who knowingly or unknowingly violate any part of the ethical code or engage in academic dishonesty may be dismissed from the program without further qualification regardless of coursework or other academic achievement.

### Career Options

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. Interested candidates should inquire with the California Board of Behavioral Examiners.

## Section II. Master's Degree Programs

### Admission to Graduate Study

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the College of Education (refer to the appropriate degree section for the address to submit additional information).

#### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

#### Master of Arts Degree in Education Counseling (Major Code: 08261)

The following materials should be mailed or delivered to:

Department of Counseling and School Psychology  
Community Based Block Program  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1179

- (1) Completed program application form (<http://edweb.sdsu.edu/csp/admissions/cbbadmission.htm>);

- (2) A personal statement;

- (3) Employment and educational history;

- (4) Three letters of recommendation.

#### Educational Leadership: Specialization in Postsecondary Education (Major Code: 08271)

#### Educational Leadership: Specialization in Student Affairs in Postsecondary Education (Major Code: 08271)

The following materials should be mailed or delivered to:

Interwork Institute  
(Attention: Graduate Adviser)  
San Diego State University  
3590 Camino del Rio North  
San Diego, CA 92108-1716

- (1) Department application (<http://interwork.sdsu.edu/arpe/>);

- (2) Two letters of recommendation.

#### Educational Leadership: Specialization in PreK-12 (Major Code: 08271)

The following materials should be mailed or delivered to:

Department of Educational Leadership  
(Attention: Graduate Adviser)  
San Diego State University  
3590 Camino del Rio North  
San Diego, CA 92108-1716

- (1) Department application;

- (2) Two letters of recommendation;

- (3) California Basic Educational Skills Test (CBEST) scores.

#### Educational Technology (Major Code: 08992)

The following materials should be mailed or delivered to:

Department of Educational Technology  
Campus Program  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1182

- (1) Department application;

- (2) Three letters of recommendation (in sealed envelopes);

- (3) Personal statement.

#### Elementary Curriculum and Instruction (Major Code: 08021)

The following materials should be mailed or delivered to:

School of Teacher Education  
College of Education  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1153

- (1) Department application.

#### Mathematics Education (K-8) (Major Code: 17012)

The following materials should be submitted by May 1 (space available until August 1) to:

Dr. Lisa Clement Lamb  
San Diego State University  
6475 Alvarado Road, Suite 206  
San Diego, CA 92120

- (1) Department application available at

<http://coe.sdsu.edu/departments/MathEd/howapply.htm>;

- (2) Two essays;

- (3) One letter of recommendation.

#### Policy Studies in Language and Cross-Cultural Education (Major Code: 08994)

The following materials should be submitted by November 1 (October 1 for international students) for the spring semester and June 1 (May 1 for international students) for the fall semester to:

College of Education (EBA-248)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1152

- (1) Department application;

- (2) Two letters of recommendation;

- (3) Letter of intent that includes reasons you wish to be admitted to the MA program;

- (4) Schedule interview with Policy Studies after submitting application.

**Reading Education  
(Major Code 08301)**

The following materials should be submitted by November 1 (October 1 for international students) for the spring semester and June 15 for the fall semester to:

School of Teacher Education  
(Attention: Pamela J. Ross)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1153

- (1) Department application;
- (2) Three letters of recommendation (professional).

**Secondary Curriculum and Instruction  
(Major Code: 08301)**

The following materials should be mailed or delivered to:

School of Teacher Education  
College of Education  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1153

- (1) Department application.

**Special Education  
(Major Code: 08081)**

The following materials should be mailed or delivered by April 1 for admission for the fall semester to:

Department of Special Education  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92108-1105

- (1) Department application.

**Master of Arts in Teaching Degree  
(Major Code: 08011)**

The following materials should be submitted by November 1 for the spring semester and June 15 for the fall semester to:

School of Teacher Education  
College of Education  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1153

- (1) Department application.

**Master of Science Degree in Rehabilitation Counseling  
(Major Code: 12221)**

The following materials should be mailed or delivered to:

Interwork Institute  
(Attention: Graduate Adviser)  
San Diego State University  
3590 Camino del Rio North  
San Diego, CA 92108-1716

- (1) Department application (<http://interwork.sdsu.edu/arpe/>);
- (2) Letters of reference;
- (3) Personal statement.

**Master of Science Degree in Counseling  
School Counseling  
(Major Code: 08261)**

The following materials should be mailed or delivered to:

Department of Counseling and School Psychology  
School Counseling Program  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1179

- (1) Completed program application form (<http://edweb.sdsu.edu/csp/admissions/admissions.htm>);
- (2) Three letters of recommendation;
- (3) Personal statements;

- (4) Resume;
- (5) California Basic Educational Skills Test (CBEST) School Counseling only.

**Master of Science Degree in Counseling  
Marriage and Family Therapy  
(Major Code: 08261)**

The following materials should be mailed or delivered to:

Department of Counseling and School Psychology  
Marriage and Family Therapy Program  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1179

- (1) Completed program application form (<http://edweb.sdsu.edu/csp/admissions/admissions.htm>);
- (2) Three letters of recommendation;
- (3) Personal statements;
- (4) Resume.

**Master of Arts Degree  
in Education**

**Admission to the Degree Curriculum**

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, or to the coordinators of the respective programs. Students in counseling and school psychology should go to the Department of Counseling and School Psychology Web site <http://edweb.sdsu.edu/csp/>.)

**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 three options are available, Education 791A (3 units), 791B (1 unit), and 791C (2 units); or Education 791A (3 units) and 791B (3 units); or Education 795A (3 units) and 795B (3 units). All candidates for the Master of Arts degree in education who elect Plan B must pass a comprehensive examination.

## Education

### 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, 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 Community Based Block (Major Code: 08261)

The Community Based Block (CBB) program is a special unit within the Department of Counseling and School Psychology that offers full-time study leading to the Master of Arts degree. The CBB seeks to develop the counseling skills of relationship building, process and therapeutic intervention; the academic skills of critical thinking, systematic inquiry and effective written and oral communication; and the personal growth experiences necessary to enable graduates to use their skills for the benefit of clients. The CBB program also seeks to adapt counseling skills to the needs of different populations so as to train truly competent multicultural counselors. The responsibility students assume for their own education helps them develop the proficiencies they will need to become effective social justice change agents in schools, colleges, and/or social service agencies.

The program is called "community based" because it has always been held off campus, in the heart of two of San Diego's multiethnic neighborhoods and because it creates a learning community in which a team of faculty and a carefully selected group of students "partner" in the learning process, each cohort of students helping to structure its learning experience. It is a "block" program because all classes are required of all students, who stay together as a group for the entire year.

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 (1-3)
    - CSP 610B Determinants of Human Behavior: Social and Cultural (1-3)
    - CSP 610C Determinants of Human Behavior: Development (1-3)
    - CSP 610D Determinants of Human Behavior: School Learning (1-3)
    - CSP 610E Determinants of Human Behavior: Biological (1-3)
    - 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) Cr/NC/RP
  - or ED 795A-795B Seminar (3-3)
  - or ED 791A Evaluation Techniques,
  - ED 791B, 791C Practicum: Evaluation (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 community and government 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 leadership positions will be admitted to this program. In order to continue in the program, the student must demonstrate ongoing academic, professional and personal growth.

**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:

- 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)
- 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 Human Resource Development in Postsecondary Education (3)
  - ARP 727 Emerging Issues in Postsecondary 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 Learning Organizations (3)
- Electives selected with the approval of the graduate adviser (6-9 units).
- ED 690 Methods of Inquiry (3)
- 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) Cr/NC/RP

**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 student affairs leadership positions will be admitted to this program. In order to continue in the program, the student must demonstrate ongoing academic, professional, and personal growth.

**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:

- 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)

- 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 Postsecondary 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
- ED 690 Methods of Inquiry (3)
  - 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) Cr/NC/RP

**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.

**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:

- Core program: Six units.
  - EDL 600 Principles of Educational Administration (3)
  - EDL 610 Educational Leadership in PreK-12 Educational Organizations (3)
- 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 Communication, Problem Solving, and Decision Making in PK-12 (3)
  - EDL 680 Seminar in PreK-12 Educational Administration (3)
- Electives selected with the approval of the graduate adviser (6-9 units).
- ED 690 Methods of Inquiry (3)
- 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) Cr/NC/RP

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. Valid California credential for teaching, pupil personnel services, school nursing, speech pathology, or librarianship.
  - e. Three years of successful, full-time K-12 school experience.
  - f. Students must have completed at least 1 unit (or the equivalent) of coursework dealing with computers in education.
2. Possession of a master's degree in Educational Administration or another field related to educational practice.
3. 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 640 Educational Leadership in School Community Relations ..... 3  
 EDL 652 Seminar in Instructional Improvement and Evaluation ..... 3  
 EDL 655 Communication, Problem Solving, and Decision Making in PK-12..... 3  
 EDL 660 Field Experience in Educational Leadership (Cr/NC/RP)..... 4-10

Total 22-28

**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 Ed.D. in Educational Leadership, Concentration in PreK-12 School Leadership 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 3.0 in graduate study.
8. A selection interview with program area faculty members.

**Program**

The program requirements for the Professional Administrative Services Credential are:

- |         |   |     |
|---------|---|-----|
| EDL 680 | Seminar in PreK -12 Educational Administration: Leadership Development.....   | 2   |
| EDL 760 | Practicum in PreK-12 Educational Organizations (Cr/NC/RP).....  | 3   |
|         | Electives selected with approval of adviser from Ed.D. in Educational Leadership, Concentration in PreK-12 School Leadership..... | 0-6 |

Issuance of the Professional Administrative Services Credential requires completion of two years of successful, full-time, 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; Teacher Education 646; and three 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) Cr/NC/RP

**Educational Technology (Major Code: 08992)**

The Master of Arts degree in education with a concentration in educational technology enables students to prepare for careers as instructional technologists, educational specialists, instructional designers, trainers, and experts in educational computing. State-of-the-art coursework and internships in companies, agencies and schools prepare candidates to analyze performance problems and design, develop and evaluate instructional strategies and products. Students graduate with a portfolio including educational computer software, 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) Cr/NC/RP

**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, 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, 650, 670, 684, 685; Administration, Rehabilitation and Postsecondary Education 605, 631, 730, 747; Policy Studies in Language and Cross-Cultural Education 601, 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) Cr/NC/RP.

The program of study must include at least 15 units of 600- and 700-level courses.

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. For specific admission criteria see the K-8 Mathematics Education Master of Arts program Web site at <http://coe.sdsu.edu/departments/MathEd/master.htm>.

### 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 Learning Theories in Mathematics Education (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 604	Seminar on Teaching Issues in Mathematics (3)
MTHED 605	Algebra in the 7-14 Curriculum (3)
MTHED 606	Selected topics in 7-14 Mathematics 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

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.

**Research:** 9 units total.

ED 690	Methods of Inquiry (3) and
ED 795A-795B	Seminar (6) or
ED 799A	Thesis (3) Cr/NC/RP and
ED 797	Research (3) Cr/NC/RP

### Plan I: Curriculum and Critical Pedagogy Specialization

**Core:**

PLC 600A	Foundations of Democratic Schooling (3)
PLC 601	Language Policies and Practices (3)
PLC 650	Curriculum Development for Urban School Communities (3)

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**Specialization:** Select 12 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 603	Community and Schools in a Diverse Society (3)
PLC 612	Qualitative Inquiries in Communities and Schools (3)
PLC 613	Organizational Strategies and Professional Development for the Multicultural School Community(3)
PLC 651	Curriculum, Teaching, and Assessment: ELD and SDAIE (3)
PLC 652	Literacy and Language: Critically Examining Curriculum for Teaching and Learning (3)
PLC 686	Seminar in Multicultural Education (1-6)
PLC 798	Special Study (1-6) Cr/NC/RP

### Plan II: Outside Specialization

#### Core:

PLC 600A	Foundations of Democratic Schooling (3)
PLC 601	Language Policies and Practices (3)
PLC 650	Curriculum Development for Urban School Communities (3)

**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 and 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 and Language Arts.
2. Core program (25-26 units)

TE 631	Seminar in Language Arts (3)
TE 633	Leadership in Literacy Education (3) or
TE 736	Field Experience as a Reading Specialist (2)
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) or
TE 677	Research Based Pedagogy for Diverse Learners (3)
TE 640	Planning for Teaching and Assessment in Writing (3)
3. ED 795A-795B Seminar (3-3) or  
ED 799A Thesis (3) Cr/NC/RP and Electives (3)

### 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 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) Cr/NC/RP and  
Electives (3 units)

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: autism, 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 Autism

Prerequisites: Special Education 527 or Basic California Teaching Credential with EEL endorsement/CLAD/BCLAD credential and Special Education 553.

Core (11 units): Special Education 651 or 655, 654, 771; Education 690.

Advanced Specialization (13 units): Special Education 510, 605, 656, 657 (alternate one-unit course for those with ECSE background), 676, 681 (in section approved by adviser), and electives selected with approval of adviser.

Culminating Experience (6 units): Education 795A-795B.

#### Specialization in Developing Gifted Potential

Core (15 units): Special Education 644, 658, 771, and six units selected with approval of adviser.

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 or Basic California Teaching Credential with EEL endorsement/CLAD/BCLAD credential, Special Education 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 Basic California Teaching Credential with EEL endorsement/CLAD/BCLAD credential; or Special Education 527 and Preliminary or Professional California credential in Mild/Moderate Disabilities.

Core (12 units): Education 690\*; Special Education 651, 653, 657; 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 Basic California Teaching Credential with EEL endorsement/CLAD/BCLAD credential; or Special Education 527 and Preliminary or Professional California credential in Moderate/Severe Disabilities.

Core (12 units): Education 690\*; Special Education 651, 654, 657; 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.

**Specialization in Vocational Transition**

Prerequisite: Special Education 501 or Administration, Rehabilitation and Postsecondary Education 684.

Core (15-18 units): 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 645B, 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 Arts in Teaching Degree****Admission to the Degree Curriculum**

Applicants must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. An applicant may apply nine units of post-baccalaureate teacher credential work from an accredited institution to the Master of Arts in Teaching (MAT) degree. Teachers wishing to participate in this program who have not completed a post-baccalaureate teaching credential from an accredited institution may still apply to the program by providing evidence of a valid teaching credential from an accredited institution, in addition to fulfilling the other admission requirements, and taking nine additional units of adviser-approved post-baccalaureate MAT coursework. It is recommended that the coursework for the MAT begin within five years of completion

of the basic teacher credential program. In order to be awarded credit for the nine post-baccalaureate credential units in the MAT, these units, along with the course of study units, cannot be more than seven years old at the time of completion of the MAT.

**Advancement to Candidacy**

A student desiring a Master of Arts in Teaching degree may be advanced to candidacy upon completion of 15 units to include TE 600, Curriculum Development in Education (3); TE 677, Research-based Pedagogy for Diverse Learners (3); TE 693, Measuring and Assessing Student Achievement in Schools (3); and two courses in the student's area of concentration.

**Specific Requirements for the Master of Arts in Teaching Degree****(Major Code: 08292)**

All candidates for the proposed MAT will be required to take a comprehensive examination. This written examination is designed to evaluate achievement in the specific area of the student's concentration. A student is eligible to take the comprehensive examination only after advancement to candidacy. The examination will be offered near the mid point of each semester and near the end of the summer. A reservation must be made at least one week in advance of the examination.

**Master of Arts in Teaching Degree**

The Master of Arts in Teaching (MAT) is designed to provide master's level professional development as part of a teacher development continuum for K-12 teachers. The goal is to increase teachers' expertise in curriculum and instruction in order to ensure learning and achievement for students from diverse populations. The degree has six concentrations from which teachers can select, depending on their interests and educational backgrounds. The six concentrations include Elementary Education, Secondary Education, Reading/Language Arts Education, Mathematics Education, Science Education, and Language Arts Education (summer only).

1. Prerequisite: A basic teaching credential to include curriculum and methods, child and adolescent growth and development, educational psychology, and history and philosophy of education.
2. Core courses (12 units): The core is comprised of courses in research, curriculum development, and educational assessment. The core includes:
  - a. TE 600 Curriculum Development in Education (3)
  - b. TE 677 Research-Based Pedagogy for Diverse Learners (3)
  - c. TE 693 Measuring and Assessing Student Achievement in Schools (3)
  - d. TE 779 Action Research in Learning Environments (3)
3. Concentrations:

**Elementary Education (12 units)**

TE 530	Children's/Adolescents' Literature (3) OR
TE 640	Planning for Teaching and Assessment in Writing (3)
TE 610A	Seminar in Mathematics Education--Elementary School (3), or other 500/600/700 level course focused on mathematics education with approval of adviser OR
TE 610C	Seminar in Science in Elementary Education (3), or other 500/600/700 level course focused on science education with approval of adviser (3 units)
TE 626	Advanced Educational Psychology (3)
TE 655	Sociocultural Foundations of American Education (2 or 3)

**Secondary Education (12 units)**

TE 626	Advanced Educational Psychology (3)
TE 640	Planning for Teaching and Assessment in Writing (3)

## Education

- TE 652 Change in Education (3)  
TE 655 Sociocultural Foundations of American Education (2 or 3) OR  
TE 790 Seminar in Teacher Education (content area focus) (3) or other 500/600/700 level course with approval of adviser (3 units)

### Reading/Language Arts Education (13 units)

- TE 530 Children's/Adolescents' Literature (3) OR  
TE 640 Planning for Teaching and Assessment in Writing (3)  
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 (3)

### Mathematics Education (12 units)

- TE 511 Assessment in Mathematics Education (3), or other 500/600/700 level course focused on mathematics education with approval of adviser (3 units)  
MTHED 600 Teaching and Learning Mathematics in the Early Grades (Pre-K to 4) (3)  
MTHED 601 Teaching and Learning Mathematics in the Middle Grades (3)  
MTHED 603 Seminar on Learning Theories in Mathematics Education (3), or other 500/600/700 level course focused on mathematics education with approval of adviser

### Science Education (12 units)

- TE 610C Seminar in Science in Elementary Education (3)  
TE 790 Seminar in Teacher Education (Science in Secondary Education) (3), or other 500/600/700 level course focused on science education with approval of adviser  
N SCI 596 Special Topics in Natural Science (1-4), or other 500/600/700 level course focused on science education with approval of adviser  
N SCI 600 Seminar in Science Education (3), or other 500/600/700 level course focused on science education with approval of adviser (3 units)

### Language Arts Education (Summer Only) (12 units)

- TE 530 Children's/Adolescents' Literature (3)  
TE 630 Seminar in Literacy and Language Arts (3)  
TE 638 Topics in Reading Education (6)

## Master of Science Degree in Rehabilitation Counseling

### General Information

The rehabilitation counseling program has the primary objective of preparing graduates 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. A limited number of students may qualify for admission to the Pupil Personnel Services – School Counseling Credential track, under a collaborative agreement with the Department of Counseling and School Psychology.

### Admission to the Degree Curriculum

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 are available at <http://www.interwork.sdsu.edu/arpe/>. As there are specific requirements for the program, it is not sufficient to file only the general university admission application.

Criteria for admission require that students submit evidence in written form (i.e. personal statement, official transcripts, and recommendation letters) 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 Division of Graduate Affairs.

### 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 Division of Graduate Affairs 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 Methods of Inquiry (3)

#### 15 units of required courses selected from the following:

- ARP 607 Applications of Rehabilitation Technology (3)  
ARP 610 Educational Leadership (3)  
ARP 615 Seminar in Multicultural Dimensions in Rehabilitation Counseling (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 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)

**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

One of three options must be completed for graduation from this program: comprehensive examination, portfolio, or thesis. The decision for this must be made by the student with the consent of the faculty adviser at least one semester prior to graduation. The student must demonstrate satisfactory performance as approved 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

Applicants interested in the school psychology program should refer to the section on the Ed.S. degree in school psychology.

The Master of Science degree in counseling provides an integrated sequence of study in the theories, research, and practice of counseling. The degree preparation offers a core of competencies and experiences with specialized study and experiences provided via defined concentrations in Marriage and Family Therapy or School Counseling.

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. Applicants interested in the community based block program should refer to this section on M.A. in Education Counseling.

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 300, 400, 401, 420, 450, 460, and 600 with 600L. 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.

### Admission to the Degree Curriculum

Applications for the M.S. in counseling with a concentration in school counseling or marriage and family therapy are considered only once a year. Applications are accepted between November 1 and February 1. We urge you to apply early. For detailed instructions on application procedures, applicants should consult the Web site <http://edweb.sdsu.edu/csp/> or contact the program director through the Department of Counseling and School Psychology, College of Education, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182-1179.

Applicants must submit separate applications to the university Graduate Admissions and to the program. Applicants receive separate notifications of application status for each application. No minimum set of qualifications in any way guarantees admission. Admission to the university does not guarantee recommendation for admission from the program. The program admissions committee

makes the recommendations for admission to the department faculty and chair who makes the final recommendation to the university Graduate Admissions. Submitted application materials may not be returned or forwarded to other academic units.

The admissions process for each program is comprised of (1) a review of written application materials that include a program application, academic transcripts, GRE scores, personal statements, three letters of recommendation, a resume, and CBEST scores (for school counseling only) and (2) a group interview process that includes a variety of small and large group interactive experiences. Assessment for admission is based on four categories of readiness: academic, interpersonal, multicultural, and preprofessional.

Applicants who wish to apply to more than one concentration (program) must apply separately to each program. They will be considered through the program's specific admissions review process. Applicants accepted to more than one program may not dually enroll in school counseling, school psychology, and marriage and family therapy.

### 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 710A or 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 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 (1-3)
CSP 610B	Determinants of Human Behavior: Social and Cultural (1-3)

## Education

- CSP 610C Determinants of Human Behavior: Development (1-3)
- CSP 610D Determinants of Human Behavior: School Learning (1-3)
- CSP 610E Determinants of Human Behavior: Biological (1-3)
- CSP 615 Seminar in Multicultural Dimensions in Counseling (3)
3. Theory, Research, and Techniques (a minimum of 12 units):
- 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 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 two to ten units, depending on the students' designed official program of study. The program is grounded in family systems theories and practice and has been awarded candidacy status accreditation by the Commission on Accreditation for Marriage and Family Therapy Education (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 supervisor and program director. 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.

Admission to the program is competitive and includes both a written application and group interview. Applicants are evaluated for academic, interpersonal, multicultural, and professional readiness. In order to demonstrate academic readiness, it is preferable for students to complete courses in some or all of these subject areas: abnormal psychology, human sexuality, human development, cultural anthropology, sociology of the family, ethnic studies, and other relevant social science courses prior to applying to the program.

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 (8 units):
- CSP 601 Theoretical Foundations of Counseling and Marriage and Family Therapy (3)
- CSP 610C Determinants of Human Behavior: Development (1-3)
- CSP 615 Seminar in Multicultural Dimensions in Counseling (3)
3. Theory, Research, and Techniques (minimum 22 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: Marriage and Family Therapy (3)
- CSP 670 Theory and Process of Group Counseling (3)
- CSP 686 Seminar in Multicultural Couple and Family Therapy Practice (3)
- CSP 692 Seminar in Couples in Therapy (2)
- CSP 693 Special Topics in Families and Larger Social Systems (1)
4. 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 (3) Cr/NC
- CSP 785 Marriage and Family Therapy Traineeship (1-10) 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.
5. Additional requirements for the concentration (minimum 9 units):
- CSP 606A Professional Issues in Mental Health Practice: Marriage and Family Therapy (3)
- 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)
6. Research (3-6 units):
- CSP 710A Professional Seminar (3)
- CSP 710B Professional Seminar (3)
- OR**
- CSP 799A Thesis (3) Cr/NC/RP

For Plan B, 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 integration paper and a comprehensive examination during their final semester of the program. In special circumstances, a student may elect to take the thesis option (Plan A).

7. Electives (0-3 units)
  - CSP 689 Family Counseling in the Schools (1)
  - CSP 741 Practicum: Group Counseling (3) Cr/NC
 or as selected in consultation with the adviser:
  - CSP 770 Advanced Seminar in Counseling (3)

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.

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 two Board of Behavioral Sciences administered written examinations.

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 619-594-3871 (<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 school counselor in grades K through 12. Applicant must also apply for the M.S. in Counseling (**Major Code: 08261**). 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.
  - d. The student must present the Certificate of Clearance from the California Commission on Teacher Credentialing prior to beginning the sequence of study. Consult the Credentials Processing Center, EBA-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 (1-3)
  - CSP 610B Determinants of Human Behavior: Social and Cultural (1-3)
  - CSP 610C Determinants of Human Behavior: Development (1-3)
  - CSP 610D Determinants of Human Behavior: School Learning (1-3)
  - 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: School Counseling and School Psychology (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 nine 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 three 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 three units selected in consultation with adviser):
  - CSP 710A Professional Seminar (3)

**OR**

  - CSP 799A Thesis (3) Cr/NC/RP

Students must maintain the minimum university requirement of 3.0 GPA. 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.

## Section III. Teaching and Service Credentials

### Admission to Graduate Study

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the College of Education (refer to the appropriate degree section for the address to submit additional information).

#### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682)

- GRE is not required for teaching credential programs;

- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Multiple Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD) Emphasis Credential: Spanish (Credential Code: 00200)

The following materials should be submitted by mid-October for admission for the spring semester and mid-March for the fall semester to:

Policy Studies in Language and Cross-Cultural  
Education Department (EBA-248)  
San Diego State University  
San Diego, CA 92182-1152

- (1) Complete department application (available at the department Web site);
- (2) Copy of scores for CBEST/Spanish Proficiency Examination/CSET;
- (3) TB test results;
- (4) Three letters of recommendation, one of which must be from an elementary teacher if multiple subject or from a secondary teacher if single subject;
- (5) Verification of early field experience (30 hours for multiple subject and 45 hours for single subject);
- (6) Certificate of clearance (live scan);
- (7) CPR that includes infant/child/adult;
- (8) A written three pages (1-1/2 each) of essays on goals and philosophy in education and an autobiography;
- (9) \$25 application processing fee;
- (10) Entrance interview will be conducted by one or more PLC faculty members.

### Single Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD) Emphasis Credential: Spanish (Credential Code: 00100)

The following materials should be submitted by mid-October for admission for the spring semester and mid-March for the fall semester to:

Policy Studies in Language and  
Cross-Cultural Education Department (EBA-248)  
San Diego State University  
San Diego, CA 92182-1152

- (1) Department application (available at the department Web site);
- (2) California Subject Examination for Teachers (CSET) scores;
- (3) California Basic Educational Skills Test (CBEST) scores;
- (4) Spanish Language Proficiency Examination;
- (5) TB verification;
- (6) Three letters of recommendation, one of which must be from an elementary teacher if multiple subject or from a secondary teacher if single subject;
- (7) Verification of early field experience (30 hours for multiple subject and 45 hours for single subject);
- (8) Certificate of clearance (live scan);
- (9) CPR that includes infant/child/adult;
- (10) A written three pages (1-1/2 each) of essays on goals and philosophy in education and an autobiography;
- (11) \$25 application processing fee;
- (12) Entrance interview will be conducted by one or more PLC faculty members.

### Reading/Language Arts Specialist Credential (Credential Code: 00410)

The following materials should be mailed or delivered to:

School of Teacher Education  
(Attention: Pamela J. Ross)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1153

- (1) Department application (paper only);
- (2) Personal statement;
- (3) Three letters of reference on official letterhead.

### Education Specialist Credentials in Special Education

The following materials should be mailed or delivered to:

Department of Special Education  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92108-1170

- (1) Department application packet.

## General Information

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 bilingual (Spanish) 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, EBA-259.

The College of Education has obtained approval for programs leading to the following credentials:

Approved Credential Program	School Service Authorized
1. Multiple Subject* (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* (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: Education Specialist Credential for the Deaf and Hard of Hearing (School of Speech, Language, and Hearing Sciences) Early Childhood Special Education Mild/Moderate Disabilities Moderate/Severe Disabilities Physical and Health Impairments	Teach special education students in the programs designated by each education specialist credential.

\* See School of Teacher Education, EBA-255, 619-594-6131 for more information.

\*\* See Department of Policy Studies in Language and Cross-Cultural Development, EBA-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 (see M.S. in Counseling, concentration in School Counseling)

School Psychology (see Ed.S. in 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-259, 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, EBA-259.

## Multiple Subject 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 by passing the Multiple Subjects examination of the California Subject Examinations for Teachers (CSET). 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: Health and Human Services 280 or Public Health 101 or approved equivalent.
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. 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).

*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, EBA-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 submit passing scores on the California Subject Examination for Teachers–Multiple Subjects (CSET-MS) in order to verify subject matter competency in diversified subjects commonly taught in self-contained classrooms. For the traditional, postbaccalaureate program (see below), test scores must be submitted prior to admission to the program. For the integrated program (see below), state law requires that test scores must be submitted prior to student teaching; check with the program for the deadline. Test scores submitted for verification of subject matter competency are valid for only five years from the date the first subtest was passed and must be valid at the time of recommendation for the credential. Registration information and materials are available at the College of Education, Office of Student Services (EBA-259) and at <http://www.cset.nesinc.com>.
3. **Prerequisite Courses.** These courses or approved equivalents must be completed with grades of "C," "CR," or higher no more than seven years prior to admission to the Multiple Subject Credential Program. The courses may be in progress at the time of program application. Proof of registration is required to be considered for admission.
  - a. **Education 451, "Introduction to Multicultural Education."** This course provides an introduction to ethnicity, language, and culture in education, particularly the ways in which those factors differentially affect educational outcomes for children. The course assists in preparing teacher applicants to work with students from diverse backgrounds by examining both societal and personal belief systems and the ways that those beliefs are expressed in public school classrooms.
  - b. **Health and Human Services 280, "Health Education for Teachers."** This course is a prerequisite for applicants.
  - c. **Mathematics 210, "Number Systems in Elementary Mathematics."** This course must have been taken within seven years of program application. In lieu of Mathematics 210, candidates may substitute any calculus course taken at a college or university within the past seven years with a grade of credit, "C," or better.
  - d. **Special Education 450, "Classroom Adaptations for Special Populations."** This course is a prerequisite for applicants.
4. **Grade Point Average.** Candidates must have a minimum 2.67 overall or 2.75 in the last 60 semester (90 quarter) 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. Candidates must submit the application directly to the California Commission on Teacher Credentialing. A copy of the certificate prior to admission must be provided to the School of Teacher Education.

**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/teachprospective.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).

**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, EBA-259, 619-594-6320. All candidates are urged to attend one of the regularly scheduled group advising sessions prior to making an individual appointment.*

**Program Description**

Students who have already earned the baccalaureate or higher degree must apply to the traditional Multiple Subject Preparation Program. SDSU Liberal Studies majors may apply to either the traditional program or, if they qualify, to the Integrated Multiple Subject Preparation Program (see below). The traditional Multiple Subject Preparation Program is offered in a variety of formats called “blocks” including the full-time blocks over two semesters, a seven-month accelerated block, and a three or four semester part-time block. The Integrated Multiple Subject Preparation Program is only offered as full-time blocks over two semesters.

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 neighboring schools.

**Requirements for the Post-Baccalaureate Multiple Subject Credential Program:**

To qualify for admission, candidates must have completed (1) a baccalaureate or higher degree and (2) the Admission Standards and Qualifications for the Multiple Subject Credential Program listed above.

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 traditional Multiple Subject Teacher Preparation Program will take the following courses. The schedule and sequence of the courses vary with individual block offerings.

	<b>Units</b>
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 (Cr/NC) . . . . .	1
TE 961 Advanced Student Teaching Seminar (Cr/NC) . . . . .	1
TE 965 Basic Student Teaching in Elementary Schools (Cr/NC) . . . . .	8
TE 966 Advanced Student Teaching in Elementary Schools (Cr/NC) . . . . .	8
EDTEC 470 Technologies for Teaching . . . . .	3
PLC 915A Teaching and Learning in the Content Area: ELD/SDAIE: Multiple Subjects . . . . .	3
<b>Total</b>	<b>43</b>

**Integrated Multiple Subject Preparation Program**

To qualify for admission, students must have completed (1) the Liberal Studies part of the nine-semester Integrated Program (see Liberal Studies in the *General Catalog*) and (2) the Admission Standards and Qualifications for the Multiple Subject Credential Program listed above. Applications for admission are completed during the seventh semester of this nine-semester program. During the “eighth” semester, each student completes classroom observations at a minimum of two different grade levels. During the “ninth” semester, each student completes student teaching either at the primary level (in grades K-3) or at the intermediate level (in grades 4-6). These experiences build upon the extensive experiences already completed in the Liberal Studies part of the Integrated program.

All students enrolled in the Integrated Multiple Subject Teacher Preparation Program will take the following courses in the eighth and ninth semesters of the program. The schedule and sequence of the courses vary with individual block offerings.

## Education

	<b>Units</b>
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 961 Advanced Student Teaching Seminar (Cr/NC).....	1
TE 966 Advanced Student Teaching in Elementary Schools Cr/NC .....	8
EDTEC 470 Technologies for Teaching.....	3
PLC 915A Teaching and Learning in the Content Area: ELD/SDAIE: Multiple Subjects .....	2
<b>Total Units</b>	<b>32</b>

For information on the Blended Integrated Program offered by the Imperial Valley campus, see the *Imperial Valley Campus Bulletin*.

### 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).

#### Standards for Admission

- CBEST.** Students must pass the California Basic Educational Skills Test prior to admission to the BCLAD credential program. This examination is required by the California Commission on Teacher Credentialing. Booklets containing registration forms and test information are available at the College of Education, Office of Student Services (EBA-259).
- 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 CSET are available at the College of Education, Office of Student Services (EBA-259) and at <http://www.cset.nesinc.com>.
- 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.

	<b>Units</b>
<b>Liberal Studies Majors.</b>	
PLC 515 Theories and Practices in Multilingual Education .....	3
ED 451 Introduction to Multicultural Education .....	3
HHS 280 Health Education for Teachers.....	1
SPED 450 Classroom Adaptations for Special Populations .....	2
<b>Non Liberal Studies Majors (must take the above and below prerequisites).</b>	
* LING 420 Linguistics and English .....	3
or	
LING 520 Fundamentals of Linguistics .....	3
* LING 452 Language Acquisition .....	3
** MATH 210 Number Systems in Elementary Education .....	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.

- 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), EBA-248. Candidates are required to submit official transcripts from all colleges and universities attended and unofficial SDSU transcripts for GPA calculations.
- 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.
- 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.
- Early Field Experience.** Applicants must provide evidence of a minimum of 30 hours of experience with students in typical elementary classroom settings within the last five years. Evidence must be documented.
- Oral English and Written Statement of Professional Goals and Philosophy.** Have an interview with the admissions and retention committee of the PLC Department.
- 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. Candidates must submit the application directly to the California Commission on Teacher Credentialing. A copy of the application must be provided to the PLC Department.
- 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 California Commission on Teacher Credentialing. Make appointment in EBA-248, telephone 619-594-5155.
- Language and Culture Examination.** All candidates must take and meet the minimum PLC Department Spanish Language Proficiency and Cultural Awareness Examination prior to entering the credential program. Please call 619-594-1160.

**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.

**Multiple Subject Bilingual Program**

	<b>Units</b>
PLC 902 Professional Portfolio (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 915A Teaching and Learning in the Content Area: English Language Development/SDAIE: Multiple Subjects . . . . .	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 (Cr/NC) . . . . .	6
PLC 961 Student Teaching for Bilingual Elementary Students (Cr/NC) . . . . .	8
PLC 962 Student Teaching for Elementary Bilingual Students II (Cr/NC) . . . . .	8
EDTEC 470 Technologies for Teaching . . . . .	3

**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.
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.
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: Health and Human Services 280, or Policy Studies in Language and Cross-Cultural Education 901, or Public Health 101, 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.*

**Bilingual (Spanish) 2042  
Multiple Subject and Special Education  
Credential Program  
(Credential Code: 00200)**

The joint Multiple Subject Bilingual Cross Cultural Language and Academic Development credential (BCLAD) (Spanish Emphasis) and Level 1 Special Education Specialist Credential for Mild/Moderate Disabilities is a two-year dual credential program. This program is available to students interested in teaching in bilingual elementary classrooms and special education settings. Upon completion, the B/CLAD 2042 multiple subjects credential authorizes the holder to teach in any self contained bilingual or regular classroom in which one teacher is responsible for all of the subjects commonly taught in the elementary schools. The specialist credential for mild/moderate disabilities authorizes the holder to teach students with designated disabilities in a variety of school settings.

Candidates who wish to apply to the two-year combined credential program need to specify "Multiple Subject BCLAD/Spanish and Special Education Emphasis" on the application for graduate admission to SDSU. Students can access the electronic application on line at: [www.csumentor.edu](http://www.csumentor.edu).

The admissions committee consists of faculty advisers from the Policy Studies and Special Education departments. Advisers from both programs will review and interview perspective candidates. The following materials should be submitted as a complete package directly to the Policy Studies in Language and Cross-Cultural Education Department.

- (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, and statement of professional goals and philosophy).

Mail or deliver your complete department admissions package to:

Policy Studies in Language and  
Cross-Cultural Education Department (BA-248)  
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 MS and SPED credential program. This examination is required by the California Commission on Teacher Credentialing. Booklets containing registration forms and test information are available from the Office of Student Testing, Assessment and Research, Student Services, Room 2549, 619-594-5216. Call the Policy Studies in Language and Cross-Cultural Education Department (PLC) 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 and Special Education programs, 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 CSET are available at the College of Education, Office of Student Services (EBA-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.

	<b>Units</b>
HHS 280	1
or P H 101	3
PLC 515	3
ED 451 or SPED 527	3
EDTEC 470 or SPED 470 and 570.	3
SPED 500	3
SPED 501 or PLC 923	3
SPED 502	1
SPED 524	3

4. **Grade Point Average.** Candidates must have a minimum 2.67 overall or 2.75 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 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 30 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.** A candidate statement (500 word maximum) that addresses background of experiences that have contributed to the desire to be a special education/bilingual teacher, as well as the personal and professional factors the candidate considers to be most important if one is to become an effective and caring bilingual special educator. Candidates will also have an interview with the admissions and retention committee of the PLC and SPED Departments.

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, EBA-250.
10. **Credential Advising Appointment.** Each applicant must meet with a faculty adviser to plan an appropriate. Make appointment in EBA-248, telephone 619-594-5155.
11. **Language and Culture Examination.** All candidates must take and meet the minimum PLC Department Spanish Language Proficiency and Cultural Awareness Examination prior to entering the credential program. Please call 619-594-1160 to schedule an appointment.
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 and SPED 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 and SPED 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: Year One**

	<b>Units</b>
ED TEC 470 Technologies for Teaching	3
PLC 902 Professional Portfolio (Cr/NC)	1
PLC 910 Teaching Mathematics to Bilingual Students	3
PLC 911 Teaching Social Studies to Bilingual Students	3
PLC 912 Teaching Science to Bilingual Students	3
PLC 915A Teaching and Learning in the Content Area: English Language Development/SDAIE: Multiple Subjects	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/First Semester (Cr/NC)	3
PLC 960 Student Teaching Seminar for Bilingual Elementary Students/Second Semester (Cr/NC)	3
PLC 961 Student Teaching for Bilingual Elementary Students (Cr/NC)	8
PLC 962 Student Teaching for Elementary Bilingual Students II (Cr/NC)	8

**Program: Year Two**

	<b>Units</b>
SPED 470 Special Education Applications (Cr/NC) . . . . .	2
SPED 505 Educational Services for Students with Serious Emotional Disturbance . . . . .	1
SPED 534 Classroom Assessment of Students with Mild/Moderate Disabilities . . . . .	3
SPED 553 Behavioral Strategies and Supports for Students with Disabilities . . . . .	3
SPED 560 Applications of Technology for Individuals with Disabilities . . . . .	3
SPED 570 Individualized Special Education Program Plans . . . . .	1
SPED 647 Special Education Adaptations of Basic Skills Instruction . . . . .	3
SPED 648 Advanced Special Education Adaptations . . . . .	3
SPED 662 Communication and Collaboration in Special Education . . . . .	1
SPED 970A Practicum: Students with Disabilities in General and Special Education: Mild/Moderate Disabilities . . . . .	4
SPED 980A Advanced Practicum in Special Education: Mild/Moderate Disabilities (Cr/NC) . . . . .	10

**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.
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.
10. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): Educational Technology 470 and Special Education 560
11. Knowledge of health education in California, including substance abuse and nutrition: Health and Human Services 280, or Policy Studies in Language and Cross-Cultural Education 901, or Public Health 101, 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 language arts:** Comparative Literature, English**Foreign languages:** Classics (Latin), Spanish**Science:** Biology, Chemistry, Geological Sciences,  
Physical Science**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, EBA-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, Health and Human Services 280, or Public Health 101, 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): EDETEC 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, EBA-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 (CEBEST) 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 seven years prior to admission to the Single Subject Credential Program. This course may be in progress at the time of program application. Proof of registration is required to be considered for admission.
  - a. Education 451, "Introduction to Multicultural Education."** This course provides an introduction to ethnicity, language, and culture in education, particularly the ways in which those factors differentially affect educational outcomes for children. The course assists in preparing teacher applicants to work with students from diverse backgrounds by examining both societal and personal belief systems and the ways that those beliefs are expressed in public school classrooms.
  - b. Health and Human Services 280, "Health Education for Teachers."** This course is a prerequisite for applicants.
  - c. Special Education 450, "Classroom Adaptations for Special Populations."** This course is a prerequisite for applicants.
- 4. Grade Point Average.** Candidates must have a minimum 2.67 overall or 2.75 in the last 60 semester (90 quarter) 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. 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. Candidates must submit the application directly to the California Commission on Teacher Credentialing. A copy of the certificate prior to admission must be provided to the School of Teacher Education.
- 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).
- 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, EBA-259, 619-594-6320. 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 daytime commitment and will be scheduled according to individual need in consultation with the program coordinator, Pat Bjornson, 619-594-7117, EBA-201, 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**

	<b>Units</b>
TE 903 Secondary School Student Teaching Seminar (Cr/NC) . . . . .	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 (Cr/NC/RP) . . . . .	4
TE 964 Secondary School Student Teaching II (Cr/NC/RP) . . . . .	12
EDTEC 470 Technologies for Teaching . . . . .	3
PLC 915B Teaching and Learning in the Content Area: ELD/SDAIE: Single Subject. . . . .	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 stationery from their training agency (no phone call verifications).

**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).

**Standards for Admission**

- 1. CBEST.** Students must pass the California Basic Educational Skills Test (CBEST) prior to admission to the Single Subject Bilingual Emphasis credential program. This examination is required by the California Commission on Teacher

Credentialing. Booklets containing registration forms and test information are available at the College of Education, Office of Student Services (EBA-259).

- 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.

	<b>Units</b>
PLC 515 Theories and Practices in Multilingual Education . . . . .	3
ED 451 Introduction to Multicultural Education . . . . .	3
HHS 280 Health Education for Teachers. . . . .	1
SPED 450 Classroom Adaptations for Special Populations . . . . .	2

- 4. Grade Point Average.** Candidates must have a minimum 2.67 overall or 2.75 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 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. Candidates must submit the application directly to the California Commission on Teacher Credentialing. A copy of the application must be provided to the PLC Department.
- 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 EBA-248, 619-594-5155.

## Education

11. **Language and Culture Examination.** All candidates must take and meet the minimum PLC Department Spanish Language Proficiency and Cultural Awareness Examination prior to entering the credential program. Please call 619-594-1160.
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.

### Single Subject Bilingual Program

Prerequisites	Units
PLC 515 Theories and Practices in Multilingual Education . . . . .	3
ED 451 Introduction to Multicultural Education . . . . .	3
HHS 280 Health Education for Teachers . . . . .	1
SPED 450 Classroom Adaptations for Special Populations . . . . .	2
<b>First Semester</b>	
PLC 400 The Secondary School and Bilingual Education . . . . .	3
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 Classroom Organization for Democratic Teaching . . . . .	1-4
PLC 963 Student Teaching for Bilingual Secondary Students I (Cr/NC) . . . . .	4
TE 914 Teaching and Learning in the Content Area: Major . . . . .	3
<b>Second Semester</b>	
PLC 903 Bilingual Secondary Student Teacher Seminar (Cr/NC) . . . . .	3
PLC 915B Teaching and Learning in the Content Area: ELD/SDAIE: Single Subject . . . . .	3
PLC 964 Student Teaching for Bilingual Secondary Students II (Cr/NC) . . . . .	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), EBA-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 280, 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, Health and Human Services 280, Public Health 101, 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.*

## Bilingual Cross-Cultural Specialist Credential

(Credential Code: 00440)

The Bilingual Cross-Cultural 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.

Prerequisites: CLAD or BCLAD credential or certificate; minimum three years teaching experience; admission to program.

### Program

24 units of coursework and a comprehensive examination to include:

	Units
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 Qualitative Inquiries in Communities and Schools . . . . .	3
PLC 613 Organizational Strategies and Professional Development for the Multicultural School Community . . . . .	3
PLC 650 Curriculum Development for Urban School Communities . . . . .	3
PLC 686 Seminar in Multicultural Education . . . . .	3

**OR**

Three units of electives with consent of adviser.



## 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 financial aid that would be available through their campus program. Cost of the program, including all university fees, room, and board is approximately \$12,000. Contact Cristina Alfaro ([calfaro@mail.sdsu.edu](mailto: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.

## Fifth Year Program for Clear Multiple or Single Subject Credential

The Fifth Year Program is approved by the Commission on Teacher Credentialing (CTC) to address the specific statutory coursework requirements for the Clear SB 2042 Multiple or Single Subject Credential for those teachers who do not have access to a district induction program. It may be used to meet specific statutory requirements in collaboration with districts that do provide an induction program. This coursework may be applied to advanced degree programs offered by the College of Education.

**Prerequisites:** A valid SB 2042 Preliminary Multiple or Single Subject Credential, or the equivalent, and verification by the employing school district or private school employer that an induction program is not available to the applicant. This coursework cannot be taken prior to issuance of the preliminary credential.

### Courses required for the certificate (12 units):

	Units
ED 601 Schools and the Pedagogy of Health Education .....	3
EDTEC 570 Advanced Teaching with Technologies .....	3
PLC 651 Curriculum, Teaching, and Assessment: ELD and SDAIE .....	3
SPED 600 Advanced Classroom Adaptations for Special Populations .....	3

**Requirements for the Clear SB 2042 Credential:** Teachers may apply for the Clear SB 2042 Multiple or Single Subject Credential through the College of Education Office of Student Services with documentation of completion of the 12 units listed above plus 18 semester post-graduate units from one of the following options:

- Post-baccalaureate study undertaken to complete an approved program of professional preparation.
- Pursuit of an approved program for an advanced or specialized credential.
- Pursuit of a master's or higher degree in education or related areas.
- A program of in-service training for which college or university credit is awarded.

A minimum 3.0 grade point average is required in all coursework pursued for the clear credential with no less than a grade of C in any course.

For additional information, contact Dr. Patricia Lozada-Santone, Assistant Dean in the College of Education at: [plozadas@mail.sdsu.edu](mailto:plozadas@mail.sdsu.edu).

The Fifth Year Program is under review by the California Commission on Teacher Credentialing and subject to change. Contact Dr. Lozada-Santone for current 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

- A valid California teaching credential applicable within the range of grades Kindergarten to 12.
- A minimum of one year of full-time K-12 teaching experience or the equivalent within the range of grades Kindergarten to 12.
- Submission of GRE scores.
- Admission and planning interviews with an adviser.

### Core Program (32 Units)

	Units
TE 530 Children's/Adolescents' Literature .....	3
TE 631 Seminar in Language Arts .....	3
TE 633 Leadership in Literacy Education .....	3
TE 634 Seminar in Research Investigations in Reading and Language Arts OR .....	4
TE 638 Topics in Reading: Reading Research AND .....	1
TE 693 Measuring and Assessing Students Achievement in Schools .....	3
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 OR .....	3
TE 677 Research Based Pedagogy for Diverse Learners ...	3
TE 640 Planning for Teaching and Assessment in Writing .....	3
TE 736 Field Experience as a Reading Specialist .....	3

### Additional Requirements

- 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.
- Satisfactory completion of a comprehensive examination covering the program coursework.

## 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.

### Standards 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, EBA-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 Student Testing, Assessment and Research Office, SS-2549. Candidates are urged to take this examination as early as possible. Candidates are required to submit a photocopy of the individual score reports.
- 2. Subject Matter 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, EBA-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. Special Education 500, 501, 502, and courses applicable to the credential area selected from Special Education 524, 525, and 528.
  - b. Special Education 527 (or CLAD/BCLAD credential) and Policy Studies in Language and Cross-Cultural Education 915C.
- 5. Grade Point Average.** Candidates must have a minimum 2.67 overall or 2.75 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, EBA-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.

### 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 530, 534, 570, 647, 648, 657, 970A, 980A, and 970A (for part-time students).
  - b. **Moderate/Severe Disabilities:** Teacher Education 910A (2 units), 930 (3 units); Special Education 510, 526, 570, 635, 645, 647, 657, 970B, 980B, and 970B (for part-time students).
  - c. **Early Childhood Special Education:** Special Education 510, 526, 530, 570, 635, 643A, 643B, 980D (Infant/Toddler), 980D (Preschool), and 970B (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. (7 units)
  - b. **Moderate/Severe Disabilities:** Special Education 651, 654. (5 units)
  - c. **Early Childhood Special Education:** Special Education 651, 655. (6 units)

4. **Knowledge of health education, including substance abuse and nutrition:** Health and Human Services 280, Public Health 101, 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

### Academic Literacy Development for English Language Learners Certificate

This certificate program provides K-12 teachers and other education professionals with specialized preparation for developing academic literacy assessment, curriculum, and teaching methods specifically designed to meet the needs of English Language Learners (ELLs). The program provides further development in theory and methods for evaluation, development, and implementation of (a) appropriate language assessment, (b) effective instruction to ELLs specific to developing academic literacy in English, and (c) culturally responsive curriculum and teaching strategies. The program is designed for professionals working in programs or classrooms with diverse language learners.

Successful applicants must have completed a bachelor's degree from an accredited institution and hold a current teaching or administrative credential. 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 (12 units): Policy Studies in Language and Cross-Cultural Education 553, 602, 651, 652. All courses completed with a grade of B or better are applicable to the Master of Arts degree in Education with Concentration in Policy Studies in Language and Cross-Cultural Education with a Specialization in Academic Literacy Development. For further information, contact the Policy Studies Department, 619-594-5155.

### Behavior Analysis Certificate

The behavior analysis certificate provides the foundational knowledge for educators, psychologists, and other interventionists to provide intervention practices based on principles of behavior analysis. The courses are approved by the Behavior Analysis Certification Board as the content sequence required prior to taking the examination.

### Admission Requirements

Prerequisites for admission include a bachelor's degree from an accredited institution in liberal studies, education, social sciences, or the helping profession with a 2.85 grade point average in the last 60 units. Candidates must maintain a 3.0 minimum grade point average in all certificate coursework with no less than a "C" in any course. Courses taken in the certificate program with a grade of "B" or better may be applied to a master's degree with the consent of the graduate adviser.

Required courses (12 units):

SPED 500	Human Exceptionality (3)
SPED 553	Behavioral Strategies and Supports for Students with Disabilities (3)
SPED 676	Advanced Applied Behavior Analysis (3)
SPED 685	Single-Case Research Design (3)

### 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 post-baccalaureate 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 the graduate adviser in the Department of Administration, Rehabilitation and Postsecondary Education (<http://www.interwork.sdsu.edu/arpe>).

## 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 Seminar in Alternative, Indigenous, and Community Healing Modalities: Trauma (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 644, 649, 658, 771, and three units selected with approval of adviser. 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 670 Exploratory Learning Through Simulation and Games (3)
- EDTEC 671 Learning Environment Design (3)
- EDTEC 685 Informational and Instructional Technologies for Organizations (3)
- EDTEC 700 Seminar in Educational Technology: Best Practices in Distance Education (1)
- EDTEC 700 Seminar in Educational Technology: Cybergogy and Engaged Learning (1)
- EDTEC 700 Seminar in Educational Technology: Management Issues in Distance Education (1)

## Dual Language Certificate in Bilingual

This certificate program provides K-12 teachers and other education professionals with specialized coursework in dual language programs; and provides instruction in two languages aimed for credentialed bilingual teachers to develop bilingualism, biliteracy, and biculturalism/multiculturalism.

Applicants must have completed a bachelor's degree from an accredited institution and hold a current bilingual teaching BCLAD, CLAD, SP 2042 multiple or single subject credential, or administrative credential, and meet the minimum language requirements of the SDSU/COE based language test (e.g. Spanish).

Required courses (12 units): Policy Studies in Language and Cross-Cultural Education 553, 600B, 604, 650. 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.

## Early Childhood Special Education Certificate

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)

## Educational Facility Planning (CEFPI/SDSU) (Offered through the College of Extended Studies)

The advanced certificate program in Educational Facility Planning (CEFPI/SDSU) provides a comprehensive course of study grounded in the knowledge and skills central to the planning, designing, building, and maintaining of learner-centered school facilities. The certificate includes appropriate benchmarks for evaluation and instructional delivery that can be accessed electronically worldwide. The goal of the program is to provide certificate candidates advance training in comprehensive educational facilities planning, aimed at producing safe and supportive, learner-centered school facilities that maximize learning opportunities for all students, staff, and the community at large.

Admission Requirement: Candidates will be admitted as non-matriculated students into the certificate program through the College of Extended Studies, Special Sessions.

### Required Courses:

- EDL 620 Seminar in Educational Facility Community Engagement and Master Planning (2)
- EDL 621 Seminar in Designing Schools to Support Diverse Learning Style Needs (2)
- EDL 622 Seminar in Educational Facility Pre-Design Planning (2)
- EDL 623 Seminar in Educational Facility Design Process (2)
- EDL 624 Seminar in Educational Facility Implementation (2)
- EDL 625 Seminar in Educational Facility Assessment and Maintenance (2)

Students must maintain a minimum grade point average of 3.0 in all certificate coursework with no less than a C in any course. Only two units of coursework with a grade of C will count toward the certificate. A maximum of two units of coursework can be repeated. Courses in the certificate program may be applied to a master's degree if applicable. A maximum of eight units may be transferred to a master's degree program with consent of the graduate adviser.

Additional fees are associated with this program. Information can be obtained from the program adviser, Dr. Cynthia L. Uline.

## Instructional 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 (9 units):

- EDTEC 540 Educational Technology (3)
- EDTEC 541 Web-Based Multimedia Development (3)
- EDTEC 544 Instructional Design (3)

Elective courses: Nine units at the 600- or 700-level to be selected with the approval of the program director.

## Instructional Technology Certificate

Refer to *General Catalog*.

## PreK-12 Educational Leadership Certificate (Preliminary Administrative Services Credential) (Credential Code: 00501)

The purpose of the certificate is to provide candidates with the skills and dispositions to lead PreK-12 organizations. Successful completion of the certificate requirements will qualify candidates for an EDL departmental recommendation for the California Preliminary Administrative Services Credential (PASC).

Admission Requirements: Candidates must be admitted to SDSU and to the Department of Educational Leadership. Admission to the Department of Educational Leadership requires that students possess a master's degree in education or related field from an accredited university or be concurrently enrolled in a master's degree program; have three years of teaching, pupil personnel service, librarian, or social work experience, have passed the CBEST, have met a computer literacy requirement; have two letters of recommendation from supervisory administrators and presently be working in a PreK-12 teaching environment in southern San Diego County where they can accomplish the needed fieldwork/practicum experiences.

### Required courses (28 units):

- 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 640 Educational Leadership in School Community Relations (3)
- EDL 652 Seminar in Instructional Improvement and Evaluation (3)
- EDL 655 Administering Educational Organizations (3)
- EDL 660 Field Experience in Educational Leadership (10) Cr/NC/RP

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 the certificate. A maximum of three units of coursework can be repeated.

## Primary Grade Writing Instruction Certificate

This certificate program provides teachers with specialized preparation for teaching writing in primary grade classrooms, with a focus on development of expertise in (1) formal and informal assessment, (2) children's expanded language skills and use of specific text structures across genres and for content-area learning, (3) effective writing instruction using instructional scaffolding, contingent teaching and teaching of strategic behavior, (4) expertise in a set of effective instructional frameworks, and (5) relating standards and high stakes assessment to design and implementation of daily instruction. The program is designed for professionals teaching in classrooms with diverse language learners.

Successful applicants must hold a current multiple subjects teaching credential and have experience teaching primary grade children. A minimum grade point average of 3.0 must be maintained in certificate coursework with one course grade of "C" allowed.

Required courses (12 units): Teacher Education 639, 641, 642, 643. Credit for successful completion of TE 639 (3) is also applicable to a reading/language arts specialist credential or Master of Arts degree in Education with a concentration in reading education. For further information, contact the program adviser, Dr. Sharan A. Gibson, 619-594-7182 or [sgibson@mail.sdsu.edu](mailto:sgibson@mail.sdsu.edu).

## Psychiatric Rehabilitation Certificate

The purpose of the certificate is to educate rehabilitation counselors to provide effective vocational rehabilitation interventions that will result in greater workforce participation and integration of individuals who experience psychiatric disabilities. This academic certificate is designed for current and aspiring rehabilitation counselors in a variety of rehabilitation settings including public and private mental health programs, supported and competitive employment programs, postsecondary education (community college, university), out-patient hospital programs, state departments of rehabilitation, private rehabilitation agencies, or other projects funded through private or government resources that serve individuals with psychiatric disabilities.

Prerequisites: A bachelor's degree from an accredited institution with demonstrated experience in disability-related work and/or academic coursework.

Required courses (15 units):

- ARP 660 Theory and Process of Counseling in Rehabilitation (3)
- ARP 687 Placement Practices with Individuals with Disabilities (3)
- ARP 740 Advanced Seminar in ARP: Psychiatric Rehabilitation (3)
- ARP 743 Fieldwork in Rehabilitation: Psychiatric Rehabilitation (3) Cr/NC
- ARP 745 Internship in Rehabilitation (3) Cr/NC

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 the certificate. A maximum of three units of coursework can be repeated. Courses in the certificate program may be applied to a master's degree if applicable.

For further information, contact the program adviser, Dr. Marjorie F. Olney, 619-594-6883.

### **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, postsecondary education organizations, 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. Unique focus areas such as disability management, tribal rehabilitation or deafness, and hard-of hearing programs are available at certain times. 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) Cr/NC

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 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.  
Contact the Department of Special Education.

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. 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, 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.

### **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 Literacy and Language: Critically Examining Curriculum for Teaching and Learning . . . 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 (EBA-248) or call 619-594-5155 for additional information.

### Supported Employment and Transition Specialist Certificate

This certificate prepares specialists who develop and implement programs in supported employment and adult community living for youth and adults with disabilities. Students must complete 21 units with a 3.0 (B) grade point average. Students are able to develop competencies in instructional interventions, living options, community networking, and career development.

Prerequisites: A bachelor's degree from an accredited institution with demonstrated experience in disability-related work and/or academic coursework.

Required courses (9 units)

- SPED 501 Typical and Atypical Learning Processes (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 Administration, Rehabilitation or Postsecondary Education; Special Education, and/or Counseling and School Psychology coursework.

Dr. Caren L. Sax is the program adviser in the Department of Administration, Rehabilitation and Postsecondary Education. She meets 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.

### Workforce Education and Lifelong Learning Certificate

The certificate offers advanced study and field-based research opportunities for educators and human service personnel 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 the graduate adviser in the Department of Administration, Rehabilitation and Postsecondary Education.

## College of Education Departments and School

### Administration, Rehabilitation and Postsecondary Education

**OFFICE:** 3590 Camino del Rio North  
San Diego, CA 92108-1716

**TELEPHONE:** 619-594-6115

**<http://interwork.sdsu.edu/arpe/>**

#### Faculty

Fred R. McFarlane, Ph.D., Professor of Administration, Rehabilitation and Postsecondary Education, Chair of Department  
L. Ron Jacobs, Ph.D., Professor of Administration, Rehabilitation and Postsecondary Education, Emeritus  
William E. Piland, Ed.D., Professor of Administration, Rehabilitation and Postsecondary Education, Emeritus, Co-Director of Ed.D. in Educational Leadership with Concentration in Community College/Postsecondary Education  
Caren L. Sax, Ed.D., Professor of Administration, Rehabilitation and Postsecondary Education (Graduate Adviser)  
Marilee J. Bresciani, Ph.D., Associate Professor of Administration, Rehabilitation and Postsecondary Education, Co-Director of Ed.D. in Educational Leadership with Concentration in Community College/Postsecondary Education (Graduate Adviser)  
Nan Zhang Hampton, Ph.D., Associate Professor of Administration, Rehabilitation and Postsecondary Education  
Marjorie F. Olney, Ph.D., Associate Professor of Administration, Rehabilitation and Postsecondary Education  
Charles E. Degeneffe, Ph.D., Assistant Professor of Administration, Rehabilitation and Postsecondary Education  
Frank Harris, III, Ed.D., Assistant Professor of Administration, Rehabilitation and Postsecondary Education

### Counseling and School Psychology

**OFFICE:** North Education 179

**TELEPHONE:** 619-594-6109 / **FAX:** 619-594-7025

**<http://edweb.sdsu.edu/csp/>**

#### Faculty

Carol A. Robinson-Zafartu, Ph.D., Professor of Counseling and School Psychology, Chair of Department  
Valerie J. Cook-Morales, Ph.D., Professor of Counseling and School Psychology (School Psychology Graduate Adviser)  
Colette L. Ingraham, Ph.D., Professor of Counseling and School Psychology  
Gerald Monk, Ph.D., Professor of Counseling and School Psychology  
Maria Nieto Senour, Ph.D., Professor of Counseling and School Psychology (Community Based Block Graduate Adviser)  
Brent A. Taylor, Ph.D., Associate Professor of Counseling and School Psychology (Marriage and Family Therapy Graduate Adviser)  
Beverly L. Booker, Ph.D., Assistant Professor of Counseling and School Psychology  
Nola M. Butler-Byrd, Ph.D., Assistant Professor of Counseling and School Psychology  
Tonika D. Green, Ph.D., Assistant Professor of Counseling and School Psychology  
Patricia A. Hatch, Ph.D., Assistant Professor of Counseling and School Psychology (School Counseling Graduate Adviser)  
Soh-Leong Lim, Ph.D., Assistant Professor of Counseling and School Psychology

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### Educational Leadership

**OFFICE:** North Education 166

**TELEPHONE:** 619-594-4063

**E-MAIL:** [awebster@mail.sdsu.edu](mailto:awebster@mail.sdsu.edu)

**<http://edweb.sdsu.edu/edleader/>**

#### Faculty

Kathleen C. Cohn, Ph.D., Professor of Educational Leadership, Chair of Department, Co-Director of Ed.D. in Educational Leadership with Concentration in PreK-12 School Leadership  
Margaret R. Basom, Ph.D., Professor of Educational Leadership  
Joel H. Brown, Ph.D., Professor of Educational Leadership  
Joseph F. Johnson, Ph.D., Professor of Educational Leadership  
Lionel R. Meno, Ed.D., Professor of Educational Leadership  
Ian R. Pumpian, Ph.D., Professor of Educational Leadership  
Cynthia L. Uline, Ph.D., Professor of Educational Leadership  
Cheryl M. James-Ward, Ed.D., Assistant Professor of Educational Leadership

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### Educational Technology

**OFFICE:** North Education 280

**TELEPHONE:** 619-594-6718 / **FAX:** 619-594-6376

**<http://edtec.sdsu.edu>**

#### Faculty

Marcie J. Bober, Ph.D., Professor of Educational Technology, Chair of Department (Graduate Adviser)  
Brockenbrough S. Allen, Ph.D., Professor of Educational Technology  
Bernard J. Dodge, Ph.D., Professor of Educational Technology  
Donn C. Ritchie, Ph.D., Professor of Educational Technology  
Farhad Saba, Ph.D., Professor of Educational Technology  
Robert P. Hoffman, Ph.D., Associate Professor of Educational Technology  
Minjuan Wang, Ph.D., Associate Professor of Educational Technology  
Theodore J. Kopcha, Ph.D., Assistant Professor of Educational Technology  
Frank Nguyen, Ph.D., Assistant Professor of Educational Technology



## Policy Studies in Language and Cross-Cultural Education

**OFFICE: Education and Business Administration 248**  
**TELEPHONE: 619-594-5155 / FAX: 619-594-1183**  
<http://edweb.sdsu.edu/PLC/>

### Faculty

Ruben W. Espinosa, Ph.D., Professor of Policy Studies in Language and Cross-Cultural Education, Chair of Department  
 Alberto M. Ochoa, Ed.D., Professor of Policy Studies in Language and Cross-Cultural Education  
 Alberto J. Rodriguez, Ph.D., Professor of Policy Studies in Language and Cross-Cultural Education  
 Karen Cadiero-Kaplan, Ph.D., Associate Professor of Policy Studies in Language and Cross-Cultural Education (Graduate Adviser)  
 James L. Rodriguez, Ph.D., Associate Professor of Policy Studies in Language and Cross-Cultural Education  
 Cristina Alfaro, Ph.D., Assistant Professor of Policy Studies in Language and Cross-Cultural Education  
 Elsa S. Billings, Ph.D., Assistant Professor of Policy Studies in Language and Cross-Cultural Education  
 Ernesto Sanz, M.A., Clinical Professor of Policy Studies in Language and Cross-Cultural Education

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## Special Education

**OFFICE: North Education 70**  
**TELEPHONE: 619-594-6665**  
<http://edweb.sdsu.edu/sped/sped.html>

### Faculty

Anne W. Graves, Ph.D., Professor of Special Education, Chair of Department  
 Laura J. Hall, Ph.D., Professor of Special Education  
 Margie K. Kitano, Ph.D., Professor of Special Education and Associate Dean in the College of Education  
 José L. Alvarado, Ph.D., Associate Professor of Special Education (Graduate Adviser)  
 John R. Johnson, Ph.D., Associate Professor of Special Education  
 Eugene C. Valles, Ph.D., Associate Professor of Special Education  
 Regina Brandon, Ph.D., Assistant Professor of Special Education  
 Luke Duesbery, Ph.D., Assistant Professor of Special Education  
 Bonnie R. Kraemer, Ph.D., Assistant Professor of Special Education  
 Angela S. McIntosh, Ph.D., Assistant Professor of Special Education  
 Yasemin Turan Qian, Ph.D., Assistant Professor of Special Education

## Teacher Education

**OFFICE: Education and Business Administration 255**  
**TELEPHONE: 619-594-6131 / FAX: 619-594-7828**  
<http://edweb.sdsu.edu/STE/teach.htm>

### Faculty

Nancy Farnan, Ph.D., Professor of Teacher Education, Director of School  
 Nadine S. Bezuk, Ph.D., Professor of Teacher Education  
 Ricardo J. Cornejo, Ph.D., Professor of Teacher Education  
 Ronald W. Evans, Ed.D., Professor of Teacher Education  
 Leif Fearn, Ed.D., Professor of Teacher Education  
 Douglas Fisher, Ph.D., Professor of Teacher Education  
 Margaret A. Gallego, Ph.D., Professor of Teacher Education  
 Ric A. Hovda, Ph.D., Professor of Teacher Education and Dean of the College of Education  
 Patricia R. Kelly, Ph.D., Professor of Teacher Education and Interim Associate Dean for Faculty Development and Research in the College of Education  
 Diane K. Lapp, Ed.D., Professor of Teacher Education  
 Cheryl L. Mason, Ph.D., Professor of Teacher Education  
 Carla S. Mathison, Ph.D., Professor of Teacher Education  
 Kathleen F. Mikitka-Gomez, Ph.D., Professor of Teacher Education  
 Barbara Moss, Ph.D., Professor of Teacher Education  
 Valerie O. Pang, Ph.D., Professor of Teacher Education  
 Cynthia Darche Park, Ph.D., Professor of Teacher Education  
 Randolph A. Philipp, Ph.D., Professor of Teacher Education  
 Pamela J. Ross, Ph.D., Professor of Teacher Education  
 André J. Branch, Ph.D., Associate Professor of Teacher Education  
 Marva Cappello, Ph.D., Associate Professor of Teacher Education  
 Alexander W. Chizhik, Ph.D., Associate Professor of Teacher Education  
 Estella W. Chizhik, Ph.D., Associate Professor of Teacher Education  
 Nancy E. Frey, Ph.D., Associate Professor of Teacher Education  
 Victoria R. Jacobs, Ph.D., Associate Professor of Teacher Education  
 Lisa L. Lamb, Ph.D., Associate Professor of Teacher Education  
 Jesus Nieto, Ph.D., Associate Professor of Teacher Education  
 Donna L. Ross, Ph.D., Associate Professor of Teacher Education  
 Rafaela M. Santa Cruz, Ph.D., Associate Professor of Teacher Education  
 Christianna Alger, Ph.D., Assistant Professor of Teacher Education  
 Sharan A. Gibson, Ph.D., Assistant Professor of Teacher Education

# Engineering

In the College of Engineering

**OFFICE: Engineering 203**

**TELEPHONE: 619-594-6061**

**E-MAIL: [info@engineering.sdsu.edu](mailto: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 Division of Graduate Affairs 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 Division of Graduate Affairs. 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 graduating from foreign universities need a cumulative grade point average of 3.0 or higher.

Students should contact their specific engineering department for GRE test requirements. Letters of recommendation for graduate study are helpful but optional.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the College of Engineering (refer to the appropriate department section for the address to submit additional information).

#### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

#### College of Engineering

The following materials should be mailed or delivered to the appropriate address listed in each department section:

- (1) Personal statement of graduate program goals;
- (2) Letters of recommendation (optional).

#### 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.

The following materials should be mailed or delivered 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

- (1) Personal statement of graduate program goals;
- (2) Letters of recommendation (optional).

**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 600-700 numbered courses in aerospace engineering and/or engineering mechanics. At least six units must be taken in the Aerospace Engineering or Engineering Mechanics specialization. At least one course must be taken 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 644	Turbulent Flow (3)

**2. Structural Mechanics**

EM 600	Seminar (1-3)
EM 611	Vibration of Elastic Solids (3)
EM 621	Theory of Elasticity (3)
EM 711	Structural Acoustics (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.

The following materials should be mailed or delivered to:

Dr. Karen May-Newman  
College of Engineering  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1323

(1) Personal statement of graduate program goals;

(2) Letters of recommendation (optional).

**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:

- Students select a specialization in biomechanics, biomaterials, or bioinstrumentation in consultation with the bioengineering graduate adviser.
- 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.
- A thesis project is required.
- Demonstration of prior coursework equivalent to a core course will enable substitution of an elective chosen in consultation with the bioengineering graduate adviser.
- At least 15 units of coursework (excluding 797, 798, 799 courses) must be from Engineering.
- 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 580	Biomechanics (3)
ME 610	Finite Element Methods in Mechanical Engineering (3)
ME 681	Biomaterials (3)
ME 685/ EE 685	MEMS Design and Applications (3)

**Biomaterials**

BIOL 585	Cell and Molecular Immunology (3)
ME 540	Nonmetallic Materials (3)
ME 681	Biomaterials (3)
ME 685/EE 685	MEMS Design and Applications (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 580	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)
CHEM 711	Chemical Thermodynamics (3)
CHEM 712	Chemical Kinetics (3)
CHEM 751	Separations Science (3)
EE 502	Electronic Devices for Rehabilitation (3)
EE 503	Biomedical Instrumentation (3)
EE 539	Instrumentation Circuits I (3)
EM 621	Theory of Elasticity (3)
ENS 610	Biomechanics: Measurement Techniques I-Kinematics (3)
ENS 611	Biomechanics: Measurement Techniques II-Kinetics (3)
ENS 612	Biomechanics: Measurement Techniques III-EMG (3)
ENS 613	Motor Control and Rehabilitation Science (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 580	Biomechanics (3)
ME 585	Fundamentals of Micro-Electro-Mechanical Systems (MEMS) (3)
ME 610	Finite Element Methods in Mechanical Engineering (3)
ME 645	Mechanical Behavior of Engineering Materials (3)
ME 656	Conduction Heat and Transfer (3)
ME 681	Biomaterials (3)
PHYS 670A	Medical Physics I (3)
PHYS 670B	Medical Physics II (3)

**Civil Engineering  
(Major Code: 09081)**

**General information:** The Department of Civil, Construction, 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 construction engineering, 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.

The following materials should be mailed or delivered to:

Dr. Julio R. Valdes, Graduate Adviser  
Department of Civil, Construction, and  
Environmental Engineering  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1324

(1) Personal statement of graduate program goals;

(2) Letters of recommendation (optional).

**Specific requirements for the degree:** The student's program, prepared in conference with and approved by the graduate adviser, must satisfy the following requirements:

1. Eighteen units of 600- and 700-numbered courses in civil engineering and/or construction 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. Construction Engineering

- CON E 650 Construction Labor Productivity (3)
- CON E 651 Project Production System Design in Construction (3)
- CON E 652 Construction Operations Modeling and Technology (3)
- CON E 653 Construction Scheduling (3)
- CON E 654 Construction Claims (3)
- CON E 655 Project Design and Portfolio Management (3)

#### 2. 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)

#### 3. 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)

#### 4. 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)

#### 5. 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)

### 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 and environmental engineering adviser, must satisfy the following requirements:

1. A minimum of 30 units of coursework, no more than three units can be taken in Environmental Engineering 797 and no more than three units can be taken in Environmental Engineering 798.
2. Eighteen units of 600-700-numbered courses in civil and environmental engineering.

### Required courses (15 units):

- 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)

### Prescribed Electives (six units):

- ENV E 553 Environmental Engineering Laboratory (3)
- ENV E 556 Air Pollution Engineering (3)
- ENV E 558 Solid and Hazardous Waste Engineering (3)
- ENV E 637 Process Design for Industrial Waste and Hazardous Waste Treatment (3)
- ENV E 797 Independent Research (1-3) Cr/NC/RP
- ENV E 798 Special Study (1-3) Cr/NC/RP
- 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)

Electives: Nine units selected in consultation with the graduate adviser:

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.

### 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 and image processing and communications systems, electro-optic system design and instrumentation, power systems, biomedical/rehabilitation engineering, computer networking, and bioinformatics.

For further information visit the Web site: <http://electrical.sdsu.edu>.

**Specific requirements for the degree:** Completion of 30 units of 500, 600, or 700-level courses to include one of two options: Plan A (Thesis) or Plan B (Comprehensive Examination). Students cannot use more than 12 units of 500-level courses. Students with the approval of Graduate Admissions are required to plan the program so they can satisfy the core and breadth course requirements.

1. Core Courses: Three units selected from Electrical Engineering 553 or 620.
2. Breadth Requirement: Students are required to complete with the approval of the graduate adviser a specific set of approved courses from the following discipline areas: Communication and Digital Signal Processing, Computer Engineering, Electronics, Physical Electronics, Power and Control Systems. The number of courses in each of the breadth discipline areas depends on Plan A (Thesis) or Plan B (Comprehensive Examination). Plan A students are required to take at least one course each from two of the discipline areas. Plan B students are required to take at least two courses each from two of the discipline areas.
3. Requirements for Plan A (Thesis): Three units from Electrical Engineering 553 or 620, six units of breadth courses, six units of Electrical Engineering 797, three units of Electrical Engineering 799A (Thesis), and 12 units of 500-, 600-, or 700-level courses. Credit for Electrical Engineering 797 will be given only after completing the thesis. Credit cannot be given for Electrical Engineering 798 for students in Plan A.

4. Requirements for Plan B (Comprehensive Examination): Three units from Electrical Engineering 553 or 620, 12 units of breadth courses, and 15 units of 500-, 600-, or 700-level courses. Electrical Engineering 797 cannot be used as one of the required courses. Students taking Plan B must pass a 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 without written permission from the graduate adviser. The adviser may require the student to successfully complete certain additional courses before taking the comprehensive examination for a third and final time. Plan B students intending to take the comprehensive examination should register in Electrical Engineering 799C during the semester. For more information, visit <http://electrical.sdsu.edu>.

#### Discipline courses:

**Communications and Digital Signal Processing:** Computer Engineering 560, 565; Electrical Engineering 553, 556, 558, 650, 652, 653, 654, 655, 656, 657, 658, 750.

**Computer Engineering:** Computer Engineering 560, 561, 565, 572; Electrical Engineering 660, 672, 675, 770.

**Electronics:** Electrical Engineering 530, 539, 631, 634, 730.

**Physical Electronics:** Electrical Engineering 540, 541, 546, 641, 642, 645, 740.

**Power and Control Systems:** Electrical Engineering 522, 580, 581, 620, 625, 720.

### 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, mechanics of materials, vibration, controls, CAD/CAM and robotics, materials, optimization and bioengineering.

The following materials should be mailed or delivered to:

Dr. Khaled Morsi, Graduate Adviser  
Department of Mechanical Engineering  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1323

(1) Personal statement of graduate program goals;

(2) Letters of recommendation (optional).

**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 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.

2. Nine additional units of 500-, 600- and 700-numbered courses approved by the graduate adviser.

### Areas of Specialization in Mechanical Engineering

#### Group A: Energy and Thermofluids

ME 651	Advanced Thermodynamics (3)
ME 653	Combustion (3)
ME 656	Conduction Heat Transfer (3)
ME 657	Convection Heat Transfer (3)
ME 658	Radiation Heat Transfer (3)
ME 661	Gas Dynamics (3)

#### Group B: Materials and Mechanics

ME 502	Continuum Mechanics (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)

### Master of Engineering Degree

(Major Code: 09134)

#### General Information

The Master of Engineering degree 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 program adviser of the respective department subject to the guidelines listed below. In addition to the course requirements, the student is required to complete a design project and a final written report. This phase of the program introduces the student to the problems and solutions faced by practicing engineers. The program is designed for both the industrial professional who is seeking a career enhancement and also to the new baccalaureate graduate who wants to continue to study in order to be able to enter the work force with well-defined and honed professional skills.

The program is administered by the associate dean of Graduate Studies and Research in the College of Engineering. The faculty responsible for directing this program are:

Dr. R. Lal Tummala, Professor and Chair, Department of Electrical and Computer Engineering

Dr. Ronald A. Kline, Professor, Department of Mechanical Engineering

Dr. Kenneth D. Walsh, Professor, Department of Civil, Construction, and Environmental Engineering

In addition to sending materials to Graduate Admissions, the following should also be mailed or delivered to:

Graduate Adviser  
Master of Engineering Program  
College of Engineering  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1326

(1) Personal statement of graduate program goals;

(2) Letters of recommendation (optional).

#### Admission to Graduate Study

All students must satisfy the general requirements for admission to the Division of Graduate Affairs 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 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 whose background, interest, and expertise are consistent with the demands of the design projects.

### Specific Requirements for Master of Engineering Degree

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 36 units to include 18 units of graduate engineering courses, 12 units of graduate business courses, and six units of project registered under Engineering 798. The courses in engineering and business administration are selected in consultation with the graduate adviser. With the consent of the adviser, one unit of 798, with appropriate content, may be substituted for one unit in business administration. No more than a total of seven units of 798 will be accepted for credit towards the degree.

The industry-oriented design project is to be selected in cooperation with the graduate adviser in the area of interest. Typically, the students take this project at the end of the program of study as a culminating experience integrating engineering and business knowledge attained through coursework and experience. A formal written report of project findings will be submitted and approved by a committee of two engineering faculty members and one faculty member from business administration.

### Section II. Doctoral Program <http://attila.sdsu.edu/jdp/>

San Diego State University is in the process of securing approval for doctoral degrees in bioengineering, electrical and computer engineering, and structural engineering for the joint Ph.D. program in engineering sciences with the University of California, San Diego. For further information, contact the College of Engineering.

### 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.

#### Program Administration

##### San Diego State University:

Program Director: Eugene A. Olevsky

##### University of California, San Diego:

Program Director: Paul Linden

### Financial Support

Students admitted to the program will be eligible for teaching assistantships 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

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.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the College of Engineering.

#### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

#### College of Engineering

The following materials should be mailed or delivered to:

Director of the Engineering Sciences/  
Applied Mechanics Joint Doctoral Program  
College of Engineering  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1326

- (1) Three letters of recommendation.

### 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 Divisions of Graduate Affairs 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 Division of Graduate Affairs 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: Eugene A. Olevsky

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, B. Westermo (Civil, Construction, and Environmental Engineering), M. Gupta, G. Lee, A. Szeto, L. Tummala (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 (Mechanical Engineering).

#### University of California, San Diego:

Program Director: Paul Linden

Committee Members: R. Bitmead, J. Goddard, S. Krashennikov, 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 biomechanics, physical and occupational therapy, prosthetics and orthotics, rehabilitation counseling, rehabilitation electronics, rehabilitation engineering, special education, speech, language, and hearing sciences, 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 Speech, Language, and Hearing Sciences 676) of disabled persons for their cognitive, communicative, and physical abilities at the SDSU Communications Clinic-Alvarado.

**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 settings as the Sharp Rehabilitation Center, Assistive Device Assessment Program within the SDSU Communications Clinic-Alvarado, 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.



## College of Engineering Departments

### Civil, Construction, and Environmental Engineering

**OFFICE: Engineering 424**

**TELEPHONE: 619-594-6071**

**E-MAIL: [ce@engineering.sdsu.edu](mailto:ce@engineering.sdsu.edu)**

#### Faculty

Janusz C. Supernak, Ph.D., Professor of Civil, Construction, and Environmental Engineering, Chair of Department

James H. Banks, Ph.D., Professor of Civil, Construction, and Environmental Engineering

M. Ziad Bayasi, Ph.D., P.E., Professor of Civil, Construction, and Environmental Engineering

David T. Hayhurst, Ph.D., Professor of Civil, Construction, and Environmental Engineering and Dean of the College of Engineering

Victor M. Ponce, Ph.D., Professor of Civil, Construction, and Environmental Engineering

Kenneth D. Walsh, Ph.D., P.E., Professor of Civil, Construction, and Environmental Engineering, The AGC Paul S. Roel Chair in Construction Engineering and Management

Bruce D. Westermo, Ph.D., Professor of Civil, Construction, and Environmental Engineering and Assistant Dean for Student Affairs of the College of Engineering

Fatih Buyuksonmez, Ph.D., P.E., Associate Professor of Civil, Construction, and Environmental Engineering

Julio R. Valdes, Ph.D., Associate Professor of Civil, Construction, and Environmental Engineering (Graduate Adviser)

R. Edward Beighley, II, Ph.D., Assistant Professor of Civil, Construction, and Environmental Engineering

Robert Dowell, Ph.D., Assistant Professor of Civil, Construction, and Environmental Engineering

Colin T. Milberg, Ph.D., Assistant Professor of Civil, Construction, and Environmental Engineering

Engy Serag, Ph.D., Assistant Professor of Civil, Construction, and Environmental Engineering

Temesgen Garoma Ararso, Ph.D., Assistant Professor of Civil, Construction, and Environmental Engineering

#### Adjunct Faculty

Claude Michel Penchina, Ph.D., Civil, Construction, and Environmental Engineering

Jong Pil Won, Ph.D., Civil, Construction, 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 Blasker Chair is intended to promote excellence in environmental engineering.

### The William E. Leonhard, Jr. Chair in Civil, Construction, and Environmental Engineering

The William E. Leonhard, Jr. Chair in Civil, Construction, 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 Leonhard Chair is intended to promote excellence in undergraduate education in civil, construction, and environmental engineering.

**Aerospace Engineering and  
Engineering Mechanics**

**OFFICE: Engineering 308**

**TELEPHONE: 619-594-6074**

**E-MAIL: [ae@engineering.sdsu.edu](mailto: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  
Allen Plotkin, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics  
Satchi Venkataraman, Ph.D., Associate Professor of Aerospace Engineering and Engineering Mechanics (Graduate Adviser)  
Gustaaf Jacobs, Ph.D., Assistant Professor of Aerospace Engineering and Engineering Mechanics

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**Mechanical Engineering**

**OFFICE: Engineering 323L**

**TELEPHONE: 619-594-6067**

**E-MAIL: [me@engineering.sdsu.edu](mailto:me@engineering.sdsu.edu)**

**Faculty**

Morteza M. Mehrabadi, Ph.D., Professor of Mechanical Engineering, Chair of Department  
Karen D. May-Newman, Ph.D., Associate Professor of Mechanical Engineering (Graduate Adviser, Bioengineering)  
Subrata Bhattacharjee, Ph.D., Professor of Mechanical Engineering  
Ronald A. Kline, Ph.D., Professor of Mechanical Engineering  
Eugene A. Olefsky, Ph.D., Professor of Mechanical Engineering, Director of Doctoral Programs  
Asfaw Beyene, Ph.D., Associate Professor of Mechanical Engineering  
James S. Burns, Ph.D., Associate Professor of Mechanical Engineering  
Thomas J. Impelluso, Ph.D., Associate Professor of Mechanical Engineering  
Kee S. Moon, Ph.D., Associate Professor of Mechanical Engineering  
Khaled B. Morsi, Ph.D., Associate Professor of Mechanical Engineering (Graduate Adviser)  
Samuel K. Kassegne, Ph.D., Assistant Professor of Mechanical Engineering  
Fletcher J. Miller, Ph.D., Assistant Professor of Mechanical Engineering  
Jingang Yi, Ph.D., Assistant Professor of Mechanical Engineering

**Adjunct Faculty**

Bryan Cornwall, Ph.D., Mechanical Engineering  
Randall German, Ph.D., Mechanical Engineering

**Electrical and Computer  
Engineering**

**OFFICE: Engineering 426**

**TELEPHONE: 619-594-5718**

**E-MAIL: [ee@engineering.sdsu.edu](mailto:ee@engineering.sdsu.edu)**

**<http://electrical.sdsu.edu>**

**Faculty**

R. Lal Tummala, Ph.D., Professor of Electrical and Computer Engineering, Chair of Department  
Madhu S. Gupta, Ph.D., Professor of Electrical and Computer Engineering, Radio Frequency Communications Systems Industry Chair  
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 (Graduate Adviser)  
Long C. Lee, 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  
Sunil Kumar, Ph.D., Associate Professor of Electrical and Computer Engineering  
Yusuf Ozturk, Ph.D., Associate Professor of Electrical and Computer Engineering  
Ashkan Ashrafi, Ph.D., Assistant Professor of Electrical and Computer Engineering  
Premanand Chandramani, Ph.D., Assistant Professor of Electrical and Computer Engineering  
Santosh V. Nagaraj, Ph.D., Assistant Professor of Electrical and Computer Engineering  
Mahasweta Sarkar, Ph.D., Assistant Professor of Electrical and Computer Engineering  
Sridhar Seshagiri, Ph.D., Assistant Professor of Electrical and Computer Engineering  
Satish Kumar Sharma, Ph.D., Assistant Professor of Electrical and Computer Engineering

**Adjunct Faculty**

Khurram Waheed, Ph.D., Electrical and Computer Engineering

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# English

In the Department of English and Comparative Literature  
In the College of Arts and Letters

**OFFICE: Arts and Letters 226**

**TELEPHONE: 619-594-5443 / FAX: 619-594-4998**

**E-MAIL: [EandCL@mail.sdsu.edu](mailto:EandCL@mail.sdsu.edu)**

**<http://literature.sdsu.edu>**

## Faculty

William A. Nericcio, Ph.D., Professor of English and Comparative Literature, Chair of Department  
Sandra B. Alcosser, M.F.A., Professor of English (Graduate Adviser, M.F.A. Program)  
Alida L. Allison, Ph.D., Professor of English and Comparative Literature  
Laurel Amtower, Ph.D., Professor of English and Comparative Literature  
Gerald J. Butler, Ph.D., Professor of English, Emeritus  
Laurie Champion, Ph.D., Professor of English  
Marilyn Chin, M.F.A., Professor of English and Comparative Literature  
Laurie D. Edson, Ph.D., Professor of English and Comparative Literature  
Gerald H. Farber, Ph.D., Professor of English and Comparative Literature, Emeritus  
Ronald J. Gervais, Ph.D., Professor of English  
Sinda J. Gregory, Ph.D., Professor of English, Emeritus  
Jerome J. Griswold, Ph.D., Professor of English, Emeritus  
Peter C. Herman, Ph.D., Professor of English and Comparative Literature  
D. Emily Hicks, Ph.D., Professor of English and Comparative Literature  
Harold Jaffe, Ph.D., Professor of English  
Lynda L. Koolish, Ph.D., Professor of English and Comparative Literature  
Sherry B. Little, Ph.D., Professor of English and Associate Dean of the College of Arts and Letters  
Lawrence F. McCaffery, Ph.D., Professor of English and Comparative Literature, Emeritus  
Harry Polkinhorn, Ph.D., Professor of English and Comparative Literature  
William N. Rogers, II, Ph.D., Professor of English and Comparative Literature, Emeritus  
Jeanette Shumaker, Ph.D., Professor of English  
Joanna M. Brooks, Ph.D., Associate Professor of English and Comparative Literature  
Clare Colquitt, Ph.D., Associate Professor of English, Director of Graduate Studies, M.A. Program  
June Cummins-Lewis, Ph.D., Associate Professor of English  
David Matlin, Ph.D., Associate Professor of English  
Barry G. Stampfl, Ph.D., Associate Professor of English  
Quentin J. Bailey, Ph.D., Assistant Professor of English and Comparative Literature  
Michael K. Borgstrom, Ph.D., Assistant Professor of English  
Catherine A. Field, Ph.D., Assistant Professor of English  
Ilya V. Kaminsky, J.D., Assistant Professor of English and Comparative Literature (Graduate Adviser, M.F.A. Program)  
Phillip Serrato, Ph.D., Assistant Professor of English and Comparative Literature  
Joseph T. Thomas, Jr., Ph.D., Assistant Professor of English

## Associateships and Scholarships

Graduate teaching associateships and graduate assistantships are available to a limited number of qualified students. Teaching associates teaching English 100 and 200 must have completed Rhetoric and Writing Studies 609, attend Rhetoric and Writing Studies 796A during the first semester of their associateship, and have the consent of the RWS GTA program director. Applications and additional information are available 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.

## Admission to Graduate Study

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of English and Comparative Literature.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Master of Arts Degree in English

The following materials should be submitted by October 1 for admission for the spring semester and February 1 for the fall semester to:

Department of English and Comparative Literature  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-8140

- (1) Three letters of recommendation (in sealed and signed envelopes) from persons in a position to judge academic ability;
- (2) A 750-1000 word statement of purpose;
- (3) A 10-page writing sample from a previous literature course, preferably an analytical essay involving research.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of English and Comparative Literature.

### Master of Fine Arts Degree in Creative Writing

The following materials should be submitted by February 1 for the fall semester to:

Department of English and Comparative Literature  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-8140

- (1) A sample of creative work (15 poems or 30 pages of prose) to enable the creative writing faculty to assess the candidate's suitability to pursue an M.F.A. in creative writing;
- (2) A 750-1000 word statement of purpose;
- (3) Three letters of recommendation.

## Master of Arts Degree in English

### Admission to the Degree Curriculum

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.

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.

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.

### 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 Seminar: American Literary Period or Movement: American Literature (3)
- ENGL 606A Seminar: American Literary Type: American Literature (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 Seminar: British Literary Period or Movement (3)  
ENGL 606B Seminar: 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 604D Seminar: Children's Literature Literary Period or Movement (3)  
ENGL 606D Seminar: Children's Literature Literary Type (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: 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 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 Seminar: Comparative Literature Literary Period or Movement (3)  
ENGL 606C Seminar: 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.** With prior approval by the graduate adviser, a student will select nine units from the following:

- RWS 600 Reading and Writing Rhetorically (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)

**Electives: Diversification in Literary and Writing Research.** With the approval of the graduate adviser, nine units selected from other English and comparative literature departmental graduate offerings. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

**Culminating Experience:**

- Plan A: (Thesis or Project) – 799A (3 units)

## Master of Fine Arts Degree in Creative Writing

### Admission to the Degree Curriculum

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.

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.

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.

If deficient, the applicant must complete undergraduate requirements commensurate with the proposed focus in the M.F.A. program.

The applicant normally must achieve a minimum score of 1050 on the Graduate Record Examination, with a minimum of 550 on the verbal section.

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 Division of Graduate Affairs. 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) Cr/NC **OR** ENGL 798 Special Study (3) Cr/NC/RP 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)
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 or Project (3) Cr/NC/RP

### Advanced Certificate in Children's/Adolescent Literature

The Department of English and Comparative Literature offers an Advanced Certificate in Children's/Adolescent Literature for those who may already have M.A. or Ph.D.s in other fields, for those who wish to undertake a shorter schedule of study than required for the M.A., for those wishing to update their knowledge (parents, teachers, librarians), and for postbaccalaureate students interested in children's and adolescent books. Teachers and other professionals will use the certificate for advancement in employment; other students will find it to be an excellent professional entree or upgrade in publishing, editing, writing, or selling children's books.

A 3.0 grade point average is required of matriculated students. Non-matriculated students' applications will be reviewed for relevant and sufficient preparation.

The advanced certificate requires 12 units selected from English 604D, 606D, 627, 700, 727, and three to six units of the 12 units selected from English 501, 502, 503. Units taken to complete the advanced certificate may be applied to an M.A. degree in English or Comparative Literature with approval of the graduate adviser. Contact the director of the children's literature program for additional information.

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# Exercise Physiology

In the School 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

Janet C. Harris, Ph.D., Professor of Exercise and Nutritional Sciences,  
Director of School

Michael J. Buono, Ph.D., Professor of Exercise and Nutritional  
Sciences

Fred W. Kolkhorst, 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)

## 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 school or the graduate adviser.

## General Information

The School 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 school provides the students an opportunity to gain exercise-related experience under the close supervision of faculty. Graduate students learn pragmatic skills, such as physiological testing, exercise training, and participant education in the field of preventive and clinical exercise programming.

## Admission to Graduate Study

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Exercise and Nutritional Sciences.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Master of Science Degree in Exercise Physiology Master of Science Degree in Nutritional Science and Master of Science Degree in Exercise Physiology

The following materials should be mailed or delivered by February 1 for admission for the fall semester to:

School of Exercise and Nutritional Sciences  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7251

- (1) Two letters of recommendation;
- (2) Statement of purpose (1-2 pages describing applicant's background, research interests/experiences, and goals).

## Master of Science Degree in Exercise Physiology

### Admission to the Degree Curriculum

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 graduate adviser of the school. 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.

### 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 for master's degree programs. At least 27 units of the 36-unit program must be in 600- and 700- numbered courses. Also, students complete their degree by choosing either Plan A or Plan B. If students select Plan A, Exercise and Nutritional Sciences 799A (thesis) is required for completion of their degree, accompanied by 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. If students select Plan B, Exercise and Nutritional Sciences 790 (Directed Readings) is required for completion of the degree.

Students are required to 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 Division of Graduate Affairs as a prerequisite for advancement to candidacy.

The school 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 or Project (3) Cr/NC/RP
<b>OR</b>	
ENS 790	Seminar in Directed Readings (3) Cr/NC
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 the Degree Curriculum

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 201, 302, 302L, 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.

#### 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. Also, students complete their degree by choosing either Plan A or Plan B. In Plan A, all students will include Nutrition 799A (thesis) or Exercise and Nutritional Sciences 799A (thesis) for completion of their degree, accompanied by a final oral examination on the field of the thesis and on the implications of the thesis research for the broader field of exercise and nutritional sciences. If students select Plan B, Exercise and Nutritional Sciences 790 (Directed Readings) is required for completion of the degree.

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

#### Plan A

NUTR 799A	Thesis or Project (3) Cr/NC/RP
<b>OR</b>	
ENS 799A	Thesis or Project (3) Cr/NC/RP

#### or Plan B

ENS 790	Seminar in Directed Readings (3) Cr/NC
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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.

The school 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.



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# French

In the Department of European Studies  
In the College of Arts and Letters

**OFFICE: Education and 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  
Mary Ann Lyman-Hager, Ph.D., Professor of French  
Steven J. Sacco, 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) a minimum score of 500 on the verbal section and 450 on the quantitative section of the Graduate Record Examination (GRE) General Test.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of European Studies.

## Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

## Department of European Studies

The following materials should be mailed or delivered to:

Department of European Studies  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7704

- (1) 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 (in sealed and signed envelopes);
- (2) A writing sample (your best paper written in French, preferably for a literature class);
- (3) The filled out graduate teaching assistant application form if you are interested in teaching French in the program). The graduate teaching assistant form should be requested from the graduate adviser for the M.A. in French before the application deadline.

## 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.

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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

Sergio J. Rey, Jr., Ph.D., Professor of Geography,  
Chair of Department

Edward Aguado, Ph.D., Professor of Geography,  
Master's Degree Programs Coordinator

Stuart C. Aitken, Ph.D., Professor of Geography

George Christakos, Ph.D., Professor of Geography, The Stephen and  
Mary Birch Foundation Chair in Geographical Studies

Lawrence R. Ford, Ph.D., Professor of Geography

Allen S. Hope, Ph.D., Professor of Geography

Piotr Jankowski, Ph.D., Professor of Geography

John F. O'Leary, Ph.D., Professor of Geography

Douglas A. Stow, Ph.D., Professor of Geography,  
Doctoral Program Coordinator

John R. Weeks, Ph.D., Professor of Geography

André Skupin, Ph.D., Associate Professor of Geography

Ming-Hsiang Tsou, Ph.D., Associate Professor of Geography

Li An, Ph.D., Assistant Professor of Geography

Trent Biggs, Ph.D., Assistant Professor of Geography

Fernando Bosco, Ph.D., Assistant Professor of Geography

Kathleen A. Farley, Ph.D., Assistant Professor of Geography

Pascale J. Marcelli, 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 Department of Geography to endow a chair and create a Center for Earth Systems Analysis Research. Dr. George Christakos, internationally recognized for his expertise in theory and methodology of spatial analysis and mathematical modeling applied to environmental, ecological, health, and geographical systems is the third holder 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's degree programs and February 1 for the Doctor of Philosophy degree program. 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, Master of Science, and Doctor of Philosophy degrees in geography. Graduate programs are generally assigned around one of the following systematic areas:

### Group A – Systematic Areas

#### Human Geography

Comparative Urban Structure  
Economic Geography  
Social and Critical Theory  
Social and Political Geography  
Urban Cultural Geography  
Urban and Regional Modeling

#### Environmental Geography

Society and Environment  
Watershed/Ecosystem Analysis

#### Physical Geography

Biogeography  
Climatology  
Geomorphology  
Hydrology

### Group B – Spatial Analytical Techniques

Cartography and Internet Mapping  
Geocomputation and Spatial Modeling  
Geographic Information Systems  
Remote Sensing and Image Processing  
Spatial Quantitative and Qualitative Methods

The main regional foci are Latin America, Western Europe, the Pacific Rim, Mexico-U.S. borderlands, arctic, and arid lands. Further information on systematic areas, techniques and regional foci, as well as general program information can be obtained through the Department of Geography's Web site at <http://geography.sdsu.edu>.

The master's degree programs are 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 Master of Arts degree program is designed around one of the systematic areas previously listed in Group A and will generally also include coursework in one of or more technical skills in Group B. The Master of Science program has two concentrations (1) geographic information science, and (2) watershed science.

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 a map library, the Stephen and Mary Birch Center for Earth Systems Analysis Research (CESAR), an image processing/GIS center, laboratories for physical geography, cartography, remote sensing and aerial interpretation, and equipment for field studies.

## Admission to Master's and Doctoral Study

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Geography.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);  
 (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

#### Master of Arts Degree in Geography

#### Master of Science Degree in Geography

The following materials should be sent to:

Department of Geography  
 Master's Program Administrative Coordinator  
 San Diego State University  
 San Diego, CA 92182-4493

- (1) Department application form (available online at [http://geography.sdsu.edu/Programs/Masters/m\\_forms.html](http://geography.sdsu.edu/Programs/Masters/m_forms.html));
- (2) A statement of your geographic research interests and professional goals, and the names of three SDSU geography faculty who would be suitable program advisers;
- (3) Three letters of recommendation.

#### Ph.D. Degree in Geography

The following materials should be sent to:

Department of Geography  
 Graduate Administrative Coordinator  
 San Diego State University  
 5500 Campanile Drive  
 San Diego, CA 92182-4493

- (1) Department application form (available online at [http://geography.sdsu.edu/Programs/PhD/p\\_forms.html](http://geography.sdsu.edu/Programs/PhD/p_forms.html));
- (2) A statement of your geographic research interests and professional goals, and the names of SDSU and UCSB geography faculty who would be suitable program advisers;
- (3) Three letters of recommendation.

## Section I. Master's Degree Programs

### Admission to the Degree Curriculum

Admission application deadline is May 1. Students applying for admission and a graduate assistantship must have their applications complete and all supporting materials received by March 1.

The Department of Geography does not encourage students to apply for admission for spring semester. Completed applications for spring admission must be submitted to the Department of Geography by September 15.

Satisfaction of the minimum requirements of San Diego State University and of 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 semester units taken as an undergraduate and a satisfactory combined score (minimum 1000) on the verbal and quantitative section of the GRE. The minimum TOEFL score is 550. Applicants taking the Computer Based Test of English must present a score of 213 or above.

Candidates whose preparation is considered insufficient by the master's advising committee will be required to complete specified courses in addition to the minimum 30 units required for the degree.

We will notify applicants of our recommendation on admission to the master's program in geography after application files in Enrollment Services and in the Department of Geography are complete. Enrollment Services will notify you of admission to the Division of Graduate Affairs.

### 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 master's advising committee. The department requires students to complete all degree requirements within seven years of the semester that they entered the M.A. program.

The requirements for students electing the Master of Arts degree program are as follows:

1. A minimum of 30 units of courses numbered 500 or above as approved by the geography department master's 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).

### 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 master'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 units from 600- and 700-numbered courses in geography.
2. Geography 700 and 701.
3. A thesis in the area of geographic information science (Geography 799A).
4. Fifteen units from the following list of geographic information science courses: Geography 581 through 585, 587 through 589, 683 through 688L, 780.
5. Additional 500-, 600-, and 700-level coursework determined in consultation with the student's thesis adviser.

#### Concentration in Watershed Science

1. A minimum of 30 units with no more than nine units from disciplines other than geography and at least 15 units from 600- and 700-numbered courses.
2. Geography 700 and 701.
3. A thesis in the area of watershed science (Geography 799A).
4. Geography 511 and six units of methods courses selected from Geography 581 through 585, 587 through 589, 683 through 688L, 780.
5. Advanced coursework (12 units) in watershed science to be determined in consultation with the student's adviser.

**Section II.  
Doctoral Program**  
<http://geography.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 previously listed.

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. Students must attain the requisite skills in programming, statistics, mathematics, and foreign language necessary to successfully pursue their research goals.

**Admission to the Degree Curriculum**

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 no later than February 1 for the Ph.D. program.

**Application.** Deadline is February 1 for the upcoming fall semester. Applicants are generally not admitted for the spring semester. Review procedures begin early February with admission notification beginning mid-March.

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 Divisions of Graduate Affairs 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.

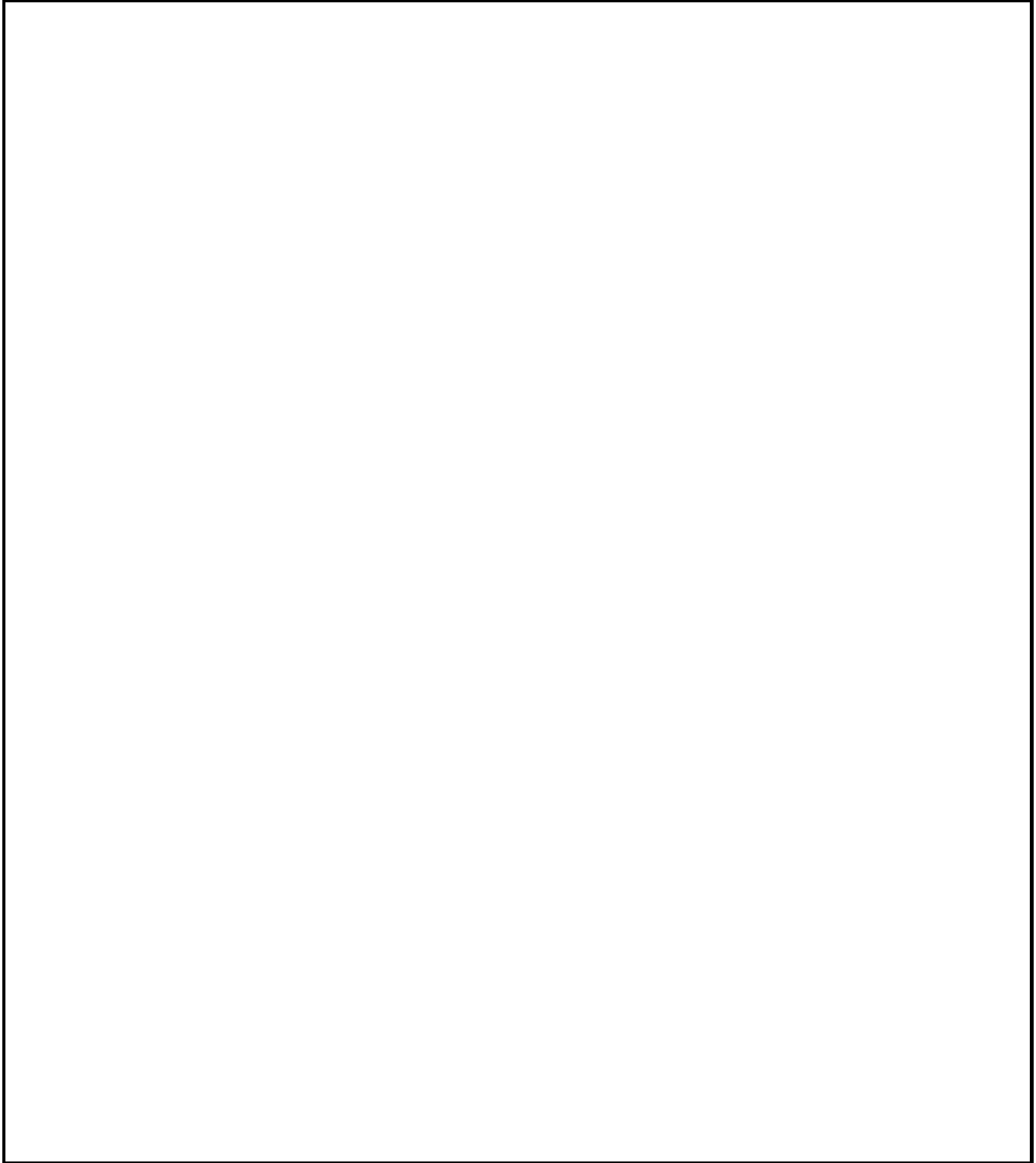
**Dissertation.** Following the successful completion of all prescribed coursework and qualifying examinations, the major remaining requirement for the Ph.D. degree will be the satisfactory completion of a dissertation consisting of original research of publishable quality carried out under the guidance 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 Divisions of Graduate Affairs.

**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.



# 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

David L. Kimbrough, Ph.D., Professor of Geological Sciences

Kim Bak Olsen, 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

Lindsey R. Leighton, Ph.D., Associate Professor of Geological  
Sciences

Kathryn W. Thorbjarnarson, Ph.D., Associate Professor of Geological  
Sciences (Graduate Adviser)

Jared R. Morrow, Ph.D., Assistant Professor of Geological Sciences

Aaron J. Pietruszka, 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

Victor E. Camp, Ph.D., Lecturer, Geological Sciences

## Adjunct Faculty

Margaret R. Eggers, Ph.D., Geological Sciences

Luis Gudiel Dalguer, Ph.D., Geophysics

John M. Fletcher, Ph.D., Geological Sciences

Marty J. Grove, Ph.D., Geological Sciences

Tomomi Kani, Ph.D., Geological Sciences

Harold W. Magistrale, Ph.D., Geological Sciences

Eleanora I. Robbins, 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

San Diego State University is in the process of securing approval for a joint Ph.D. program in Geophysics with the University of California, San Diego. For further information, contact the Department of Geological Sciences.

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> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Geological Sciences.

**Graduate Admissions**

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);  
(3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

**Department of Geological Sciences**

The following materials should be mailed or delivered to:

Department of Geological Sciences  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1020

- (1) Department application available at:  
<http://www.geology.sdsu.edu/gradprogram/applicants.htm>;  
(2) Two letters of reference.

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, and a graduate program consisting of 30 units of upper division and graduate courses selected from the geological sciences and closely related fields. This program must be approved by the graduate adviser.

A minimum of 18 units must be selected from 600- and 700-numbered courses in the Department of Geological Sciences. Graduate students are required to complete three units of Geological Sciences 797 Research and three units of Geological Sciences 799A Thesis (Plan A) or three units of Geological Sciences 750, Research and Technical Writing (Plan B). Both Plan A and Plan B students are required to pass a final oral examination. With approval of the graduate adviser, students may include 12 units of approved upper division and graduate electives from acceptable courses offered in other related areas. No more than six units of the upper division electives may be Department of Geological Sciences courses.

# German

In the Department of European Studies  
In the College of Arts and Letters

**OFFICE: Education and 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 Rebien, 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.

# 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

## Adjunct Faculty

Anthony D'Angelo, M.S., Gerontology

Judith Joffe, M.S.S.W., Gerontology

Juan Ramón Valle, Ph.D., Gerontology

## 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. 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 Division of Graduate Affairs requirements for admission. Admission requirements are outlined in the graduate application package for an advanced degree in gerontology at San Diego State University.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Gerontology.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.

- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

(2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

(3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Department of Gerontology

The following materials should be submitted by May 1 for the fall semester to:

Department of Gerontology  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1872

- (1) Three letters of reference in support of your application from academic references;
- (2) Personal statement outlining your goals, background, interests, and abilities;
- (3) Resume.

## 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 601 Theory in Gerontology .....	3
GERO 602 Policy Development, Analysis, and Evaluation.....	3
GERO 603 Healthy Aging.....	3
GERO 605 Long-Term Care.....	3
GERO 630 Research Methods and Evaluation.....	3
GERO 700A Practicum (Cr/NC).....	3
GERO 700B Practicum (Cr/NC).....	3
GERO 797 Research (Cr/NC/RP).....	3
GERO 799A Thesis (Plan A) <b>OR</b> GERO 798 (Plan B).....	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.

**Plan A or Plan B.** Students who complete Plan A, Thesis option for the M.S. degree in gerontology must include GERO 797 and 799A (Thesis) in the 30-unit program, and are required to pass a final oral examination on the thesis. Students in Plan B (non-thesis option) must include GERO 797 and 798 in the 30-unit program, and pass a comprehensive written examination.



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# History

In the College of Arts and Letters

**OFFICE: Arts and Letters 588**

**TELEPHONE: 619-594-5262 / FAX: 619-594-2210**

**<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 (Graduate Adviser)

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

Andrew Wiese, Ph.D., Professor of History

Edward Beasley, Ph.D., Associate Professor of History

Stephen A. Colston, Ph.D., Associate Professor of History

Paula S. De Vos, Ph.D., Associate Professor of History

Kathryn J. Edgerton-Tarpley, Ph.D., Associate Professor of History

Sarah S. Elkind, Ph.D., Associate Professor of History

Mathew S. Kuefler, Ph.D., Associate Professor of History

John C. Putman, Ph.D., Associate Professor of History

Andrew J. Abalihin, Ph.D., Assistant Professor of History

Edward J. Blum, Ph.D., Assistant Professor of History

Sandra S. Campbell, Ph.D., Assistant Professor of History

Thomas P. Passananti, Ph.D., Assistant Professor of History

Walter D. Penrose, Ph.D., Assistant Professor of History

Elizabeth Ann Pollard, 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.

## 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 to demonstrate sufficient preparation for the program. The minimum grade point average required for application 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).

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of History.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

**Department of History**

The following materials should be mailed or delivered to:

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

- (1) A statement of purpose of approximately 400 words;
- (2) Two academic letters of recommendation (in sealed envelopes, signed across the seal).

**Advancement to Candidacy**

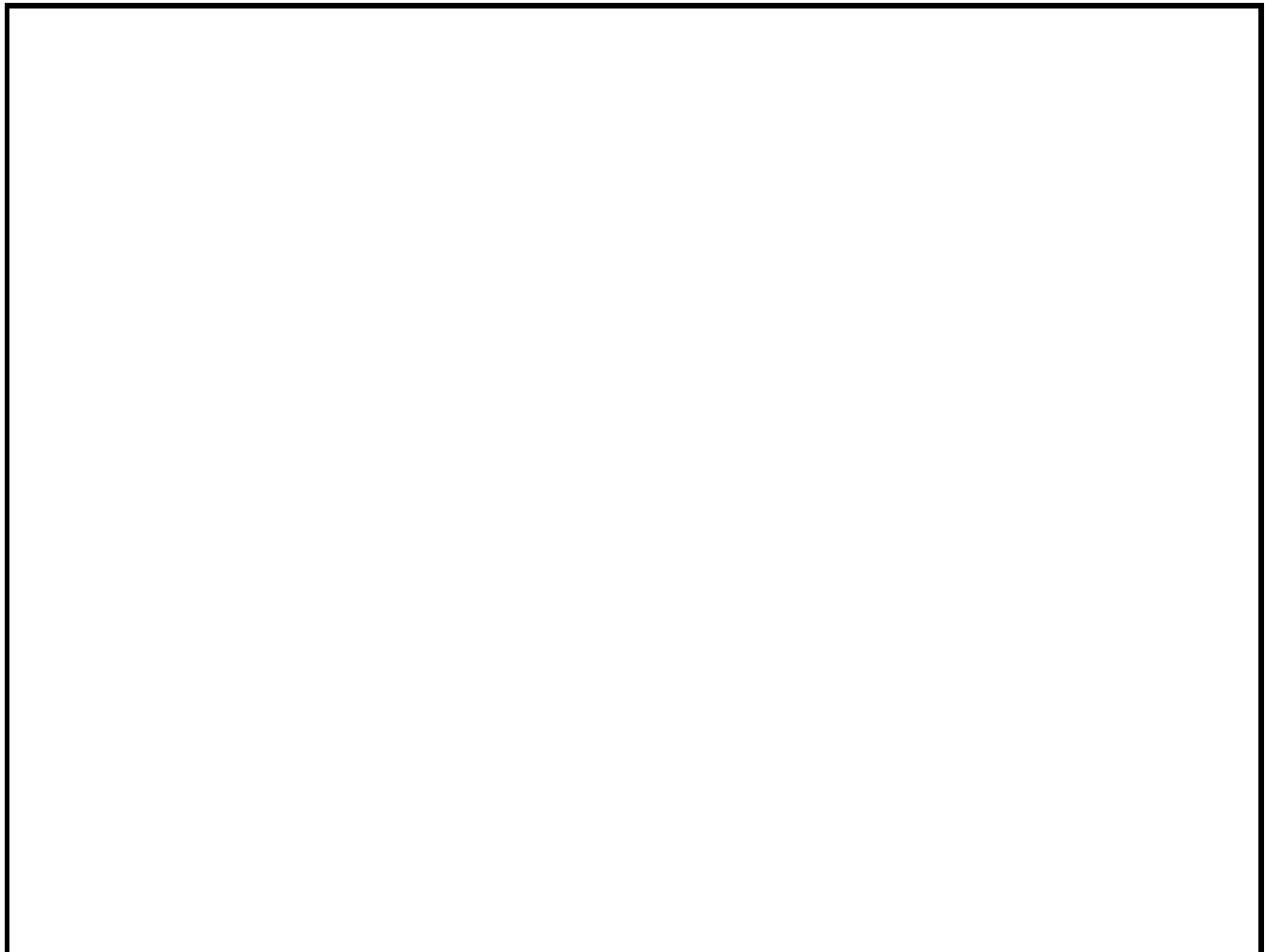
All students must satisfy the general requirements for advancement to candidacy, as stated in Part Two of this bulletin, as well as the specific requirements of the department. All students should consult the graduate adviser.

**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, requiring a thesis, or Plan B, requiring a comprehensive written examination in two fields 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 a relevant foreign language. Course selection and programs must be approved by the graduate adviser prior to the student's registration.



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# Homeland Security

In the College of Sciences

**OFFICE: Chemistry Sciences Laboratory 120**

**TELEPHONE: 619-594-5960**

**FAX: 619-594-0921**

**<http://www.homelandsecurity.sdsu.edu>**

## Associated Faculty for Homeland Security

Eric G. Frost, Ph.D., Associate Professor of Geological Sciences,  
Co-Director, Center for Homeland Security Technology  
Assessment, Co-Director of Homeland Security Program  
Jeffrey S. McIlwain, Ph.D., Associate Professor of Public Affairs,  
Co-Director of Homeland Security Program  
Robert W. Welty, Director, Homeland Security SDSU Research  
Foundation, SDSU Research Foundation, Co-Director, Center for  
Homeland Security Technology Assessment, Homeland Security  
Projects Director for Homeland Security Program  
Stephanie Kay Brodine, M.D., Professor of Public Health, Division  
Head of Epidemiology and Biostatistics  
Mary Ann Lyman-Hager, Ph.D., Professor of French, Director of  
Language Acquisition Resource Center  
Stanley R. Maloy, Ph.D., Professor of Biology and Dean of the College  
of Sciences  
Cezar M. Ornatowski, Ph.D., Professor of Rhetoric and Writing Studies  
Patrick J. Papin, Ph.D., Professor of Physics and Associate Dean for  
Graduate and Research Affairs of the College of Sciences  
Robert S. Pozos, Ph.D., Professor of Biology  
Douglas A. Stow, Ph.D., Professor of Geography  
William G. Tong, Ph.D., Professor of Chemistry and Biochemistry  
Murray Jennex, Ph.D., Associate Professor of Information and  
Decision Systems  
Khaleel Mohammed, Ph.D., Associate Professor of Religious Studies  
Sherry Ryan, Ph.D., Associate Professor of Public Affairs  
Ming-Hsiang Tsou, Ph.D., Associate Professor of Geography

## General Information

The homeland security program offers interdisciplinary graduate study leading to the Master of Science degree in homeland security. The homeland security program is the first of its kind in the nation, taking advantage of the unique learning and research opportunities offered by the "living laboratory" that is the San Diego/Tijuana border region. The program provides a strong, active interdisciplinary educational environment that welcomes students with diverse professional, disciplinary, and cultural backgrounds.

The mission of the homeland security program is to produce leaders from a variety of educational and professional backgrounds who can effectively and efficiently identify, design, and mobilize the appropriate community resources to prevent, deter, preempt, defend against, and respond to terrorist attacks and/or other critical incidents and emergencies on the local, regional, national and international levels.

The active participation of graduate students and faculty with community partners is a primary focus of the homeland security program. Therefore, the program has established a number of collaborative relationships with public, private, and non-profit sector partners on the international, federal, state, and local levels. These relationships allow the homeland security graduate student to engage in a number of service-learning opportunities.

The program emphasizes international and comparative approaches in the educational process. To that end, thematic and semester-long study abroad opportunities are provided in countries such as Afghanistan, Australia, Canada, China, France, Germany, Indonesia, Kazakhstan, Kyrgyzstan, Mexico, Netherlands, Poland, Russia, Spain, and Turkey. Students may also pursue a graduate-level

certificate in Transborder Public Administration and Governance through the School of Public Affairs. Language and cultural learning opportunities are provided by SDSU's congressionally established Language Acquisition Resource Center.

The homeland security program provides an intellectually and professionally vibrant educational environment that welcomes students with a strong desire to engage in interdisciplinary study, critical thinking, and research. Both domestic and international students are encouraged to apply.

## Admission to Graduate Study

The application deadlines are posted on the Web site at <http://homelandsecurity.sdsu.edu> or can be obtained from the homeland security program director or graduate adviser. All students must satisfy the general requirements for admission to the university with classified graduate standing as described in Part Two of this bulletin. In addition, students must demonstrate sufficient preparation for the program. This may include a bachelor's degree in sciences, engineering, law enforcement, international security, public policy, or a related discipline providing educational preparation for a career in homeland security. The degree must be from an accredited institution or indicate completion of equivalent academic preparation as determined by the Graduate Dean. 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 admissions committee may be admitted as conditionally classified and will be required to complete specified courses in addition to the minimum of 36 units required for the degree.

The grade-point average required for admission to the master's program in homeland security is 2.85 in undergraduate coursework plus satisfactory scores on the verbal and quantitative sections of the GRE. An interview by the admissions committee may also be required.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Homeland Security Program.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Homeland Security Program

The following materials should be mailed or delivered to:

Director, Homeland Security Program  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1020

## Homeland Security

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- (1) Two letters of recommendation from persons in a position to judge academic ability (in sealed, signed envelopes);
- (2) One letter of recommendation from a person in a position to judge professional ability and potential (in sealed, signed envelope);
- (3) A two-page maximum personal statement giving reasons for choosing homeland security as a degree objective;
- (4) A two-page maximum personal statement summarizing applicant's qualifications, skill sets, and life experiences as they apply to the homeland security 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

**(Major Code: 22102)**

In addition to meeting the requirements for the Master of Science degree, as described in Part Two of this bulletin, students must complete 36 units of coursework in an officially approved course of study as outlined below. Students must earn a minimum grade point average of B (3.0) in the master's program and no less than a C in each course. Students may meet the culminating experience requirement through Plan A by completing H SEC 799A or through Plan B by completing H SEC 790 and successfully passing a comprehensive examination.

**Graduate Program** (36 units)

**Core Courses** (12 units)

- |           |   |
|-----------|---|
| H SEC 601 | Seminar in Homeland Security (3)                          |
| H SEC 602 | Seminar in Science, Technology, and Homeland Security (3) |
| H SEC 603 | Seminar in Emergency Preparedness and Response (3)        |
| H SEC 604 | Seminar in Law, Society, and Homeland Security (3)        |

Students must select nine units from one of the specializations listed below:

#### Specialization in Communication and Information Systems

- |           |  |
|-----------|--|
| EUROP 560 | Technologies and Methodologies: Language Learning and Technology (3) |
| GEOG 583  | Internet Mapping and Distributed GIServices (3)                      |
| IDS 687   | Data Communications and Distributed Data Processing (3)              |
| IDS 691   | Decision Support Systems (3)   |

#### Specialization in Science and Technology

- |          |   |
|----------|---|
| CHEM 550 | Instrumental Methods of Chemical Analysis (2) |
| GEOL 505 | Photogeology and Remote Sensing (3)           |
| PHYS 561 | Nuclear Instrumentation (3)                   |

#### Specialization in Terrorism and Asymmetrical Warfare

- |           |  |
|-----------|--|
| H SEC 620 | Seminar in Warfare and Homeland Security (3)                 |
| H SEC 621 | Seminar in Intelligence and Homeland Security (3)            |
| CJ 570    | Organized Crime: Domestic and International Perspectives (3) |
| CJ 601    | Seminar in the Administration of Criminal Justice (3)        |

#### Specialization in Infrastructure and Homeland Security

- |           |  |
|-----------|--|
| CIV E 580 | Traffic Engineering Design (3)               |
| CIV E 620 | Traffic Flow and Control (3)                 |
| CP 730    | Seminar in Urban Transportation Planning (3) |
| GEOG 556  | Location and Spatial Structure of Cities (3) |

**Field Experience or Practicum** (3-6 units)

- |           |   |
|-----------|---|
| H SEC 650 | Homeland Security Study Abroad (3 or 6) |
| H SEC 695 | Practicum in Homeland Security (3)      |

**Electives** (6-9 units)

Six to nine units of electives selected in consultation with the graduate adviser.

**Plan A or Plan B** (3 units)

Students who complete Plan A, thesis or project option must include H SEC 799A in their program of study. Students who complete Plan B, non-thesis option must include H SEC 790 in their program of study and pass a comprehensive examination.

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# Interdisciplinary Studies

Administered by the Division of Graduate Affairs

**OFFICE: Student Services 1410**  
**TELEPHONE: 619-594-5215 / FAX: 619-594-0189**  
**E-MAIL: [gra@mail.sdsu.edu](mailto:gra@mail.sdsu.edu)**  
**<http://gra.sdsu.edu>**

## 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 Division of Graduate Affairs 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 may 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 Division of Graduate Affairs. 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.

## 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 Division of Graduate Affairs as soon as possible after admission to the program and must submit an approved program of study within two semesters. 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> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Division of Graduate Affairs.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Division of Graduate Affairs

An essay explaining the rationale for using the Interdisciplinary Studies program as the vehicle for the master's degree must be submitted by November 1 for admission for the spring semester and May 1 for the fall semester to:

Associate Dean  
Division of Graduate Affairs  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-8020

In the essay, state concisely why you wish to pursue the interdisciplinary studies major including career objectives. Explain why existing campus programs cannot meet your academic objectives.

## 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 nine 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.

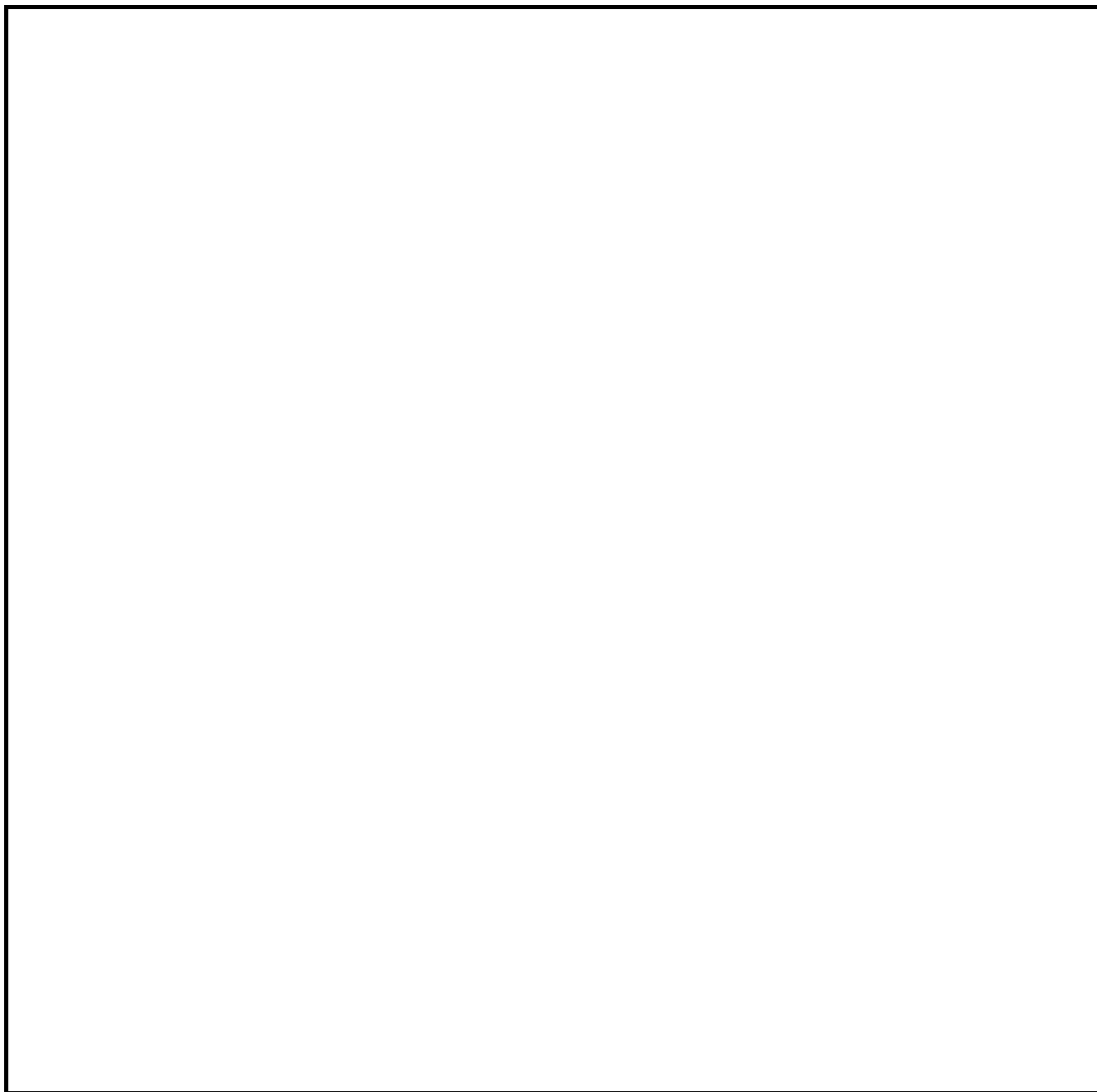
## General Procedures for the Program

1. After meeting with the associate dean of the Division of Graduate Affairs, 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 Division of Graduate Affairs. 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 Division of Graduate Affairs 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.

## ***Interdisciplinary Studies***

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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 Division of Graduate Affairs, where it will be reviewed by the graduate dean for final endorsement to 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 Division of Graduate Affairs.



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# Journalism and Media Studies

In the College of Professional Studies and Fine Arts

**OFFICE: Professional Studies and Fine Arts 361**  
**TELEPHONE: 619-594-5450 / FAX: 619-594-6246**  
**E-MAIL: [jms@mail.sdsu.edu](mailto:jms@mail.sdsu.edu)**  
**<http://jms.sdsu.edu>**

## Faculty

Diane L. Borden, Ph.D., Professor of Journalism and Media Studies,  
Director of School  
Glen M. Broom, Ph.D., Professor of Journalism and Media Studies,  
Emeritus  
Joel J. Davis, Ph.D., Professor of Journalism and Media Studies  
(Graduate Adviser)  
David M. Dozier, Ph.D., Professor of Journalism and Media Studies  
William F. Eadie, Ph.D., Professor of Journalism and Media Studies  
Barbara Mueller, Ph.D., Professor of Journalism and Media Studies  
K. Tim Wulfemeyer, Ed.D., Professor of Journalism and Media Studies  
Mei Zhong, Ph.D., Associate Professor of Journalism and Media  
Studies  
Ronald J. Arceneaux, Ph.D., Assistant Professor of Journalism and  
Media Studies  
Bey-Ling Sha, Ph.D., Assistant Professor of Journalism and Media  
Studies  
John M. Eger, J.D., The Lionel Van Deerlin Professor of Communication  
and Public Policy

## Associateships

Graduate students are employed in the School of Journalism and Media Studies in teaching, research, and other areas. Graduate teaching associateships are available to a limited number of qualified students. Applications and instructions for applying are available online at <http://jms.sdsu.edu>. Please submit application with other graduate application materials by February 1 for the subsequent fall semester.

## General Information

The School of Journalism and Media Studies offers graduate study leading to the Master of Arts degree in communication with a specialization in mass communication and media studies. This degree prepares students either for additional graduate work, leadership positions in key communication industries and professional areas, or teaching careers at the community college level. Graduates occupy leadership positions in advertising, journalism, media and telecommunications management, new media, public relations, and telecommunications policy, as well as enter premier doctoral programs across the country.

Research interests of faculty and students include media message and program strategies, media organizations and professionals, audience uses of media, media history, media and gender, media production, media ethics, media law, new media studies and technologies, media criticism, media management, telecommunication regulation and policy, and international media.

## Admission to Graduate Study

The specialization in mass communication and media studies admits students for the fall semester only. Application package must be received and completed by February 1.

In addition to meeting the general requirements for admission to the university with classified graduate standing as outlined in Part Two of this bulletin, students applying for admission to the Master of Arts degree in communication with a specialization in mass communication and media studies, are evaluated according to the following criteria:

1. Undergraduate major or minor in advertising, journalism, radio-television, public relations, or a related communication discipline. Those lacking adequate undergraduate preparation may be admitted conditionally to the program and may be required to take one or more 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).

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Journalism and Media Studies.

### Graduate Admissions

The following materials should be submitted by February 1 as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682). 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;

- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

For international applicants for whom English is not their first language, TOEFL paper scores of 550 (or 213 online) or higher and one of the following: 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; or a score of 6.5 or better on the International English Language Testing System (IELTS). Satisfaction of minimum requirements is not a guarantee of admission.

### School of Journalism and Media Studies

The following materials should be mailed or delivered by February 1 to:

School of Journalism and Media Studies  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4561

- (1) Three letters of recommendation from academic or professional references that speak to the student's ability to succeed in graduate studies.
- (2) A personal statement of purpose composed by the applicant that: a) describes the applicant's undergraduate and/or professional preparation for graduate studies in the program and b) articulates the personal and/or career objectives that graduate studies in mass communication and media studies will help the applicant pursue.

### **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, the student must complete a minimum of 30 units in courses acceptable in master's degree programs. 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 nine units of graduate coursework in departments other than the School of Journalism and Media Studies. Students may not repeat any course in their program of study without consent of the graduate adviser and instructor.

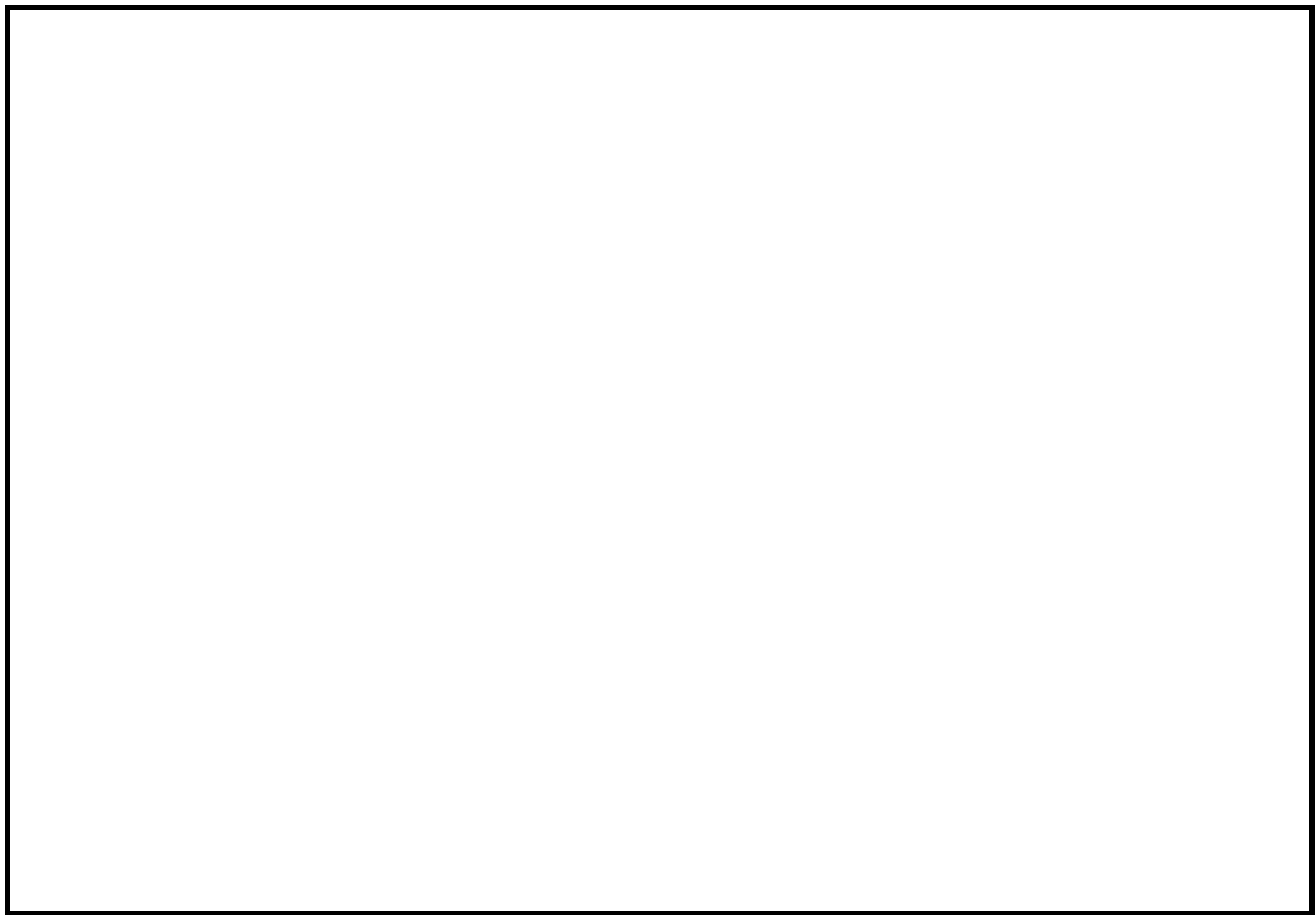
#### **Specialization in Mass Communication and Media Studies**

This specialization offers advanced study 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 is appropriate for individuals who seek a career in journalism, advertising, or 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. Please see the School of Journalism and Media Studies Web site for the most current information.

**Proficiency Requirements.** Individuals must demonstrate relevant undergraduate coursework for their desired area of focus within the specialization. Individuals without adequate preparation may be asked to take 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 Journalism and Media Studies 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 Journalism and Media Studies and pass the Comprehensive Examination in journalism and media studies. The remaining 27 units of the program must include completion of Journalism and Media Studies 600A and 600B with an average grade of B or better in the two courses, or consent of the Journalism and Media Studies faculty; 12 units selected from Journalism and Media Studies 505, 506, 560, 574, 581, 585, 589, 591, 596, 602, 603, 620, 696, 701, 708, 750, 764, 775, 780, 785, 798, and nine units relevant to the specialization selected with the approval of the graduate adviser. No more than nine units may be taken outside the School of Journalism and Media Studies. No more than six units may be taken as special study (798).





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# Kinesiology

In the School 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

Janet C. Harris, Ph.D., Professor of Exercise and Nutritional Sciences, Director of School  
Peter M. Aufesser, Ph.D., Professor of Exercise and Nutritional Sciences  
Kathryn J. LaMaster, Ph.D., Professor of Exercise and Nutritional Sciences and Associate Dean of the College of Professional Studies and Fine Arts  
Robert A. Mechikoff, Ph.D., Professor of Exercise and Nutritional Sciences  
Patricia Patterson, 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)  
David Kahan, Ph.D., Associate Professor of Exercise and Nutritional Sciences  
Susan S. Levy, Ph.D., Associate Professor of Exercise and Nutritional Sciences  
Simon J. Marshall, Ph.D., Associate Professor of Exercise and Nutritional Sciences  
Denise A. Wiksten, Ph.D., Associate Professor of Exercise and Nutritional Sciences  
Daniel J. Cipriani, Ph.D., Assistant Professor of Exercise and Nutritional Sciences  
Charles F. Morgan, 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 director of the school or the graduate adviser.

## General Information

The School 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 school are Specialization in Exercise and Sport Psychology and Specialization in Rehabilitation Science. Each 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 school also has several clinical facilities that provide the opportunity for students and faculty to work with students, patients and subjects. In addition, 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 graduate adviser of the school. 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> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Exercise and Nutritional Sciences.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### School of Exercise and Nutritional Sciences

The following materials should be submitted by October 1 for admission for the spring semester and February 1 for the fall semester to:

School of Exercise and Nutritional Sciences  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7251

- (1) Two letters of recommendation;
- (2) Statement of purpose (1-2 pages describing applicant's background, research interests /experiences, and goals).

### 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, and 684 are required for all students seeking a Master of Arts degree in kinesiology. Also, students can complete their degree by choosing either Plan A or Plan B. If students select Plan A, Exercise and Nutritional Sciences 799A (thesis) is required for completion of their degree, accompanied by a final oral examination on the field of the thesis/project and on the implications of the thesis research for the broader field of kinesiology. If students select Plan B, Exercise and Nutritional Sciences 790 (Directed Readings) is required for completion of the degree.

Students seeking a Master of Arts degree in kinesiology are required to develop a formal plan of study that must be approved by the graduate adviser before being forwarded to the Division of Graduate Affairs.

The generalist program allows students to combine courses that best fit their interests. The school graduate coordinator counsels students in the general degree program before suggesting a program adviser. Students are required to take mandated core courses and 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 school 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 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 and Exercise Psychology (3)
- ENS 687 Exercise Psychology: From Theory to Practice (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.

### Specialization in Rehabilitation Science

Application of principles of biomechanics, motor control, and athletic training to science of physical rehabilitation. Emphasis is placed on techniques of data acquisition and analysis to assess and evaluate motor performance of clinical and non-clinical populations.

Required courses (18 units):

- ENS 500 Seminar in Neurophysiological and Mechanical Bases of Therapeutic Exercise (3)
- ENS 603 Measurement and Evaluation in Exercise and Rehabilitation (3)
- ENS 610 Biomechanics: Measurement Techniques I – Kinematics (3)
- ENS 611 Biomechanics: Measurement Techniques II – Kinematics (3)
- ENS 612 Biomechanics: Measurement Techniques III – EMG (3)
- ENS 613 Motor Control and Rehabilitation Science (3)

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# Latin American Studies

In the College of Arts and Letters

**OFFICE: Arts and Letters 377**

**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)

Catalina Amuedo-Dorantes, Ph.D., Professor of Economics

Claudia V. Angelelli, Ph.D., Professor of Spanish

Joseph W. Ball, Ph.D., Professor of Anthropology

Lynn H. Gamble, Ph.D., Professor of Anthropology

Lawrence A. Herzog, Ph.D., Professor of Public Affairs

Brian E. Loveman, Ph.D., Professor of Political Science

William A. Neruccio, Ph.D., Professor of English and Comparative  
Literature

Norma Ojeda, Ph.D., Professor of Sociology

Gail L. Robinson, Ph.D., Professor of Spanish and Linguistics

John R. Weeks, Ph.D., Professor of Geography

David V. Carruthers, Ph.D., Associate Professor of Political Science

Stephen A. Colston, Ph.D., Associate Professor of History

Adelaida R. Del Castillo, Ph.D., Associate Professor of  
Chicana and Chicano Studies

Paula S. De Vos, Ph.D., Associate Professor of History

Jill Esbenshade, Ph.D., Associate Professor of Sociology

Juan M. Godoy, Ph.D., Associate Professor of Spanish

Jonathan Graubart, Ph.D., Associate Professor of Political Science

Kristen Hill Maher, Ph.D., Associate Professor of Political Science

José Mario Martín-Flores, Ph.D., Associate Professor of Spanish

Doreen J. Mattingly, Ph.D., Associate Professor of Women's Studies

Ramona L. Pérez, Ph.D., Associate Professor of Anthropology  
(Graduate Coordinator)

Elisa J. Sobó, Ph.D., Associate Professor of Anthropology

Gregory A. Talavera, M.D., Associate Professor of Public Health

William G. Acree, Ph.D., Assistant Professor of Spanish

Fernando Bosco, Ph.D., Assistant Professor of Geography

Frederick J. Conway, Ph.D., Assistant Professor of Anthropology

Nancy Deffebach, Ph.D., Assistant Professor of Art, Design, and Art  
History

Liana Ewald, Ph.D., Assistant Professor of Spanish

Victoria González-Rivera, Ph.D., Assistant Professor of Chicana and  
Chicano Studies

Irene Lara, Ph.D., Assistant Professor of Women's Studies

Matthew T. Lauer, Ph.D., Assistant Professor of Anthropology

Peter P. Lindquist, Ph.D., Assistant Professor of Spanish

Arion T. Mayes, Ph.D., Assistant Professor of Anthropology

Thomas P. Passananti, Ph.D., Assistant Professor of History

Paul Ganster, Ph.D., Director, Institute for Regional Studies of the  
Californias

## Admission to Graduate Study

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Center for Latin American Studies.

## Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions

Enrollment Services

San Diego State University

San Diego, CA 92182-7416

(1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

(2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

(3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

## Master of Arts Degree in Latin American Studies

The following materials should be mailed or delivered to:

Center for Latin American Studies

(Attention: Graduate Adviser)

San Diego State University

5500 Campanile Drive

San Diego, CA 92182-4446

(1) Personal statement;

(2) Three letters of reference.

## Master of Business Administration Degree and Master of Arts Degree in Latin American Studies

The following materials should be submitted by November 1 (October 1 for international students) for admission for the spring semester and May 1 for the fall semester to:

Center for Latin American Studies

(Attention: Graduate Adviser)

San Diego State University

5500 Campanile Drive

San Diego, CA 92182-4446

(1) Personal statement;

(2) Resume;

(3) Letters of reference (optional, maximum three).

## Master of Public Health Degree and Master of Arts Degree in Latin American Studies

The following materials should be mailed or delivered to:

Center for Latin American Studies

(Attention: Graduate Adviser)

San Diego State University

5500 Campanile Drive

San Diego, CA 92182-4443

(1) Complete the concurrent degree program application Parts I and II (includes narrative statement);

(2) Submit three letters of recommendation;

(3) Provide evidence of competence in or prior academic preparation in Latin American Studies, social and/or behavioral sciences, biological sciences, and/or health sciences;

(4) Provide evidence of professional and academic activities related to Latin American Studies or the chosen area of concentration in the Graduate School of Public Health.

## **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 Affairs, 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 the Degree Curriculum**

In addition to meeting the requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin, the student must present the Bachelor of Arts degree with not less than 18 units of courses of Latin American content in three areas. A student whose preparation is deemed insufficient by his graduate adviser or by the Latin American Studies committee will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

### **Advancement to Candidacy**

All students must satisfy the general requirements for advancement to candidacy described in Part Two of this bulletin. Moreover, students must demonstrate an oral and reading proficiency in Spanish through either the satisfactory completion of an oral and a written examination, or: (1) satisfactory completion of Spanish 201 and 202, and a reading examination administered by the Department of Spanish and Portuguese Languages and Literatures, or (2) satisfactory completion of three units of 500-level or graduate coursework in Spanish. In addition, students must complete satisfactorily (with a grade of B or better) Portuguese 101. Coursework at or above the 500 level may be included as a part of the official program with the approval of the graduate coordinator.

### **Specific Requirements for the Master of Arts Degree**

**(Major Code: 03081)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Two of this bulletin, the student must complete at least 30 units of upper division and graduate coursework, including Latin American Studies 600 and 601, with not less than 24 units in courses of Latin American content selected from those listed below and distributed as follows:

	<b>600- and 700-numbered Courses</b>	<b>500-, 600- and 700-numbered Courses</b>
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 Degree and Master of Arts Degree in Latin American Studies**

### **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 director of graduate programs in the College of Business Administration.

### **Admission to the Degree Curriculum**

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.

### **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.

### **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 54-72 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 seven courses (21 units):
  - BA 650 Financial Reporting and Analysis I (3)
  - BA 651 Organizational Behavior (3)
  - BA 652 Statistical Analysis (3)
  - BA 653 Managerial Economics (3)
  - BA 655 Marketing (3)
  - BA 662 Operations Management (3)
  - BA 665 Financial Management I (3)

A maximum of 18 units of core courses may be waived.
3. Complete one course from each of the below listed themes (6 units):
  - Corporate Responsibility: Legal, Ethical, and Social Issues in Business Theme**
  - ACCTG 681 Seminar in Regulatory and Management Controls (3)
  - FIN 604 Legal Environment for Executives (3)
  - MGT 722 Seminar in Business Ethics and Social Institutions (3)
  - MGT 746 Seminar in Corporate Governance (3)
  - Management of Technology Issues in Business Theme**
  - IDS 688 Information Systems in Organizations (3)
  - IDS 691 Decision Support Systems (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 600 Seminar in Latin American Studies (3)
  - LATAM 601 Seminar on Methodology of Latin American Studies (3)

The remaining 18 units selected from the following list of courses:

**Latin American Studies**

- LATAM 550 Mexican-US Border from a Latin American Perspective (3)
- LATAM 560 Latin American after World War II (3)
- LATAM 580 Special Topics \* (3)
- LATAM 696 Experimental Topics\* (3)
- LATAM 795 Latin American Studies Internship (3) Cr/NC
- LATAM 797 Research (3) Cr/NC/RP

**Anthropology**

- ANTH 520 Ethnographic Field Methods (3)
- ANTH 582 Regional Anthropology\* (3)
- ANTH 583 Topical Anthropology \* (3)

**Economics**

- ECON 565 North American Economic Relations (3)
- ECON 720 Seminar in Development and Planning\* (3)

**History**

- 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)

**Political Science**

- 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 651 Seminar in Migration and Border Politics (3)
- POL S 667 Seminar in Latin American Political Systems (3)

**Sociology**

- SOC 554 United States-Mexico Transborder Populations and Social Change (3)
- SOC 740 Seminar in Social Psychology: Sociological Approaches (3)

**California Western School of Law**

Students may take two courses from California Western School of Law with the approval of the Latin American Studies graduate adviser. Students must apply to enroll under the provisions of the affiliation agreement with the California Western School of Law.

\* Acceptable when of relevant content; check with the Latin American Studies graduate adviser before enrolling. 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.

**Master of Public Health Degree and Master of Arts Degree in Latin American Studies**

**General Information**

The Graduate School of Public Health (GSPH) and the Center for Latin American Studies offer a concurrent graduate program leading to a Master of Public Health (MPH) in Epidemiology, Environmental Health, or Health Promotion and a Master of Arts (MA) in Latin American Studies. This concurrent program offers preparation in the fields of public health and Latin American studies for the purpose of promoting health, preventing disease, and enhancing the delivery of social and health services in Latino communities.

**Admission to the Degree Curriculum**

To request information about the concurrent graduate program in Public Health and Latin American Studies, applicants should contact either the Graduate School of Public Health Director of the MPH/MA program, or the Latin American Studies Director of the M.A. program, San Diego State University. Students must meet the general requirements to graduate study at the university as detailed in Part Two of this bulletin. Application materials are also available from the GSPH Web site at <http://publichealth.sdsu.edu> or the Center for Latin American Studies Web site at <http://latinamericanstudies.sdsu.edu>.

**Advancement to Candidacy**

All students must: (1) meet the general requirements for advancement to candidacy as described in Part Two of this bulletin; (2) pass an evaluation of progress towards the concurrent degree by both GSPH and Latin American Studies advisers; (3) complete all core courses in Public Health and Latin American Studies; (4) 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; (5) have been recommended for advancement by the combined faculty advisory committee; (6) have an approved concurrent program of study; and (7) have a thesis proposal approved by the combined faculty advisory committee, which must include at least one faculty member from Latin American Studies and one faculty member from Public Health.

Upon advancement to candidacy, the student will enroll in Public Health or Latin American Studies 797 (Research) and Public Health or Latin American Studies 799A (Thesis). All students in the concurrent degree program are required to complete a thesis. This thesis will incorporate theory, method, and analytic techniques from both Public Health and Latin American Studies. The thesis topic and chair will be determined by the student and the faculty advisory committee. All students must pass the American Council of Teachers of Foreign Language (ACTFL) oral proficiency examination in either Spanish or Portuguese with a score of 2.0 or above.

**Specific Requirements for the MPH/MA Degree**

**(Major Code: 12141/03081)**

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 60 units as listed below. The 60 units include 37 units of general requirements and 23 units of public health concentration requirements.

**General Requirements**

*Total General Units = 37*

<i>Core Courses (16 units)</i>	<i>Prescribed Electives (15 units from at least two departments)</i>			<i>Culminating Experience (6 units)</i>
P H 601 (3)	ANTH 508 (3)	HIST 640 (3)	POL S 566 (3)	P H 797 or LATAM 797 (3)
P H 602 (3)	ANTH 520 (3)	LATAM 550 (3)	POL S 567 (3)	P H 799A or LATAM 799A (3)
P H 604 (2)	ANTH 529 (3)	LATAM 560 (3)	POL S 568 (3)	
P H 605 (2)	ANTH 583 (3)	LATAM 580 (3)	POL S 661 (3)	
LATAM 600 (3)	ANTH 603 (3)	LATAM 696 (3)	POL S 667 (3)	
LATAM 601 (3)	ECON 565 (3)	LATAM 700 (3)	SOC 555 (3)	
	ECON 720 (3)	LATAM 795 (3)	SOC 740 (3)	
	HIST 551 (3)	LATAM 798 (3)	WMNST 512 (3)	
	HIST 552 (3)	POL S 564 (3)		

**Public Health Concentration Requirements**

*Total Units = 23*

**Students must complete one of the following concentrations.**

**Epidemiology Concentration**

*Total Epidemiology Units = 23*

*Required Courses (14 units)*

- P H 603 (2)
- P H 621 (3)
- P H 622 (3)
- P H 623 (3)
- P H 627 (3)

*Prescribed Electives (6 units)*

- P H 625 (3)    P H 722 (3)
- P H 626 (3)    P H 723 (3)
- P H 628 (3)    P H 724 (3)
- P H 649 (3)    P H 726 (3)
- P H 700A (3)    P H 823 (3)
- P H 721 (3)    P H 824 (3)

*Electives (3 units)*

BIOL 585,  
NUTR 600, 606, 607, 700,  
STAT 510, 550, 551A, 560, 672, 677,  
or three units of electives to be selected  
with approval of the faculty advisory  
committee.

**Health Promotion Concentration**

*Total Health Promotion Units = 23*

*Required Courses (15 units)*

- P H 607 (3)
- P H 661 (3)
- P H 662 (3)
- P H 663 (3)
- P H 666 (3)

*Prescribed Electives (5 units)*

- P H 664 (3)
- P H 667 (3)
- P H 668 (3)
- P H 700F (3)
- P H 721 (3)
- P H 761 (3)
- P H 762 (3)

*Electives (3 units)*

Three units to be selected with the  
approval of the faculty advisory  
committee.

**Environmental Health Concentration**

*Total Environmental Health Units = 23*

*Required Courses (17 units)*

- P H 603 (2)
- P H 632 (3)
- P H 634 (3)
- P H 636 (3)
- P H 638A (3)
- P H 639 (3)

*Prescribed Electives (at least 6 units)*

- P H 630 (3)
- P H 635 (3)
- P H 637 (3)
- P H 700C (3)
- P H 721 (3)
- P H 732 (3)
- P H 737A (3)
- P H 737B (3)
- P H 738 (3)
- P H 798 (1-3)

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# Liberal Arts and Sciences

In the College of Arts and Letters

**OFFICE: Nasatir Hall 203**

**TELEPHONE: 619-594-4826 / FAX: 619-594-1325**

**E-MAIL: [clewis@rohan.sdsu.edu](mailto:clewis@rohan.sdsu.edu)**

**<http://www.malas.sdsu.edu>**

**Director: Sherry B. Little**

**Program Coordinator: Christopher Lewis**

## Participating Faculty

Susan E. Cayleff, Ph.D., Professor of Women's Studies  
Patricia J. Geist-Martin, Ph.D., Professor of Communication  
Dipak K. Gupta, Ph.D., Professor of Political Science  
D. Emily Hicks, Ph.D., Professor of English and Comparative Literature and Chicana and Chicano Studies  
Linda D. Holler, Ph.D., Professor of Religious Studies and Associate Dean of the College of Arts and Letters  
Alan E. Kilpatrick, Ph.D., Professor of American Indian Studies  
William A. Nericcio, Ph.D., Professor of English and Comparative Literature  
Steven L. Barbone, Ph.D., Associate Professor of Philosophy  
Jung Min Choi, Ph.D., Associate Professor of Sociology  
Stephen A. Colston, Ph.D., Associate Professor of History  
Elizabeth A. Colwill, Ph.D., Associate Professor of Women's Studies  
Sarah S. Elkind, Ph.D., Associate Professor of History  
Ellen Quandahl, Ph.D., Associate Professor of Rhetoric and Writing Studies  
Sandra A. Wawrytko, Ph.D., Associate Professor of Philosophy  
Kathy S. Williams, Ph.D., Associate Professor of Biology  
Deboleena Roy, Ph.D., Assistant Professor of Women's Studies  
Sthaneshwar Timalsina, Ph.D., Assistant Professor of Religious Studies

## John and Jane Adams Endowment

John R. Adams was an esteemed faculty member of San Diego State University from 1928 until his retirement in 1968, whereupon he accepted the position of University Archivist. Dr. Adams was a professor of English and chair of the Division of Humanities. He and Jane Adams were generous benefactors to SDSU throughout their lives and they established a Charitable Living Trust to be used to promote liberal education. Today some of those funds are used in the MALAS program to support graduate assistantships and to help pay for academic retreats, workshops, and lectures. In addition, MALAS has arrangements with two sister institutions, the University of Maastricht in The Netherlands and Simon Fraser University in Canada, to convene an annual conference that revolves among the three sites. Funds from the Adams Endowment are used to send students to present papers at Maastricht and Simon Fraser.

## General Information

The College of Arts and Letters offers a flexible multidisciplinary master's degree in the liberal arts and sciences. An alternative approach to traditional graduate education, the program consists of coursework that crosses disciplinary boundaries so as to better appreciate the richness of existence and begin to apply multiple perspectives to the complex realities that face us. From explorations of the human condition to the social impacts of technology, the program focuses on issues central to the meaning and quality of our lives and the creation of sustainable, just, communities.

In existence since 1987, the Master of Arts in Liberal Arts and Sciences is equally well suited to students who recently achieved the bachelor's degree, students preparing for the Ph.D., professionals for whom the master's degree may mean promotion or career advancement, and life-long learners in search of personal enrichment and intellectual community. We welcome applications from K-12 teachers, community activists, and policy makers.

MALAS draws upon SDSU faculty who are trained in disciplines but whose teaching and scholarship makes connections across disciplines. Interplays among the humanities, the social sciences, the natural sciences, and the arts are taken up in four required courses. These seminars seek to understand contemporary life and construct positive futures but they also push the level of discourse to foundational questions of epistemology and perennial philosophy, such as the existence of truth, goodness, and beauty. Particular attention is given to understanding the psychological, economic, and environmental consequences of globalization, and to the ways that human values are embodied in and transformed by modes of consumption, labor, and material culture. The four core courses act to ground and center five elective courses, selected by each student to customize a program that captures his or her interests.

## Admission to Graduate Study

In addition to satisfying the requirements for admission to the university with classified graduate standing as described in Part Two of this bulletin, the student seeking admission 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 an acceptable score on the GRE General Test (combined verbal and quantitative), and (3) complete a statement of purpose essay. A personal interview with the director is recommended.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to Master of Arts in Liberal Arts and Sciences.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Master of Arts in Liberal Arts and Sciences

The following materials should be submitted by November 1 (October 1 for international students) for admission for the spring semester and May 1 for the fall semester to:

Master of Arts in Liberal Arts and Sciences  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-8137

- (1) Statement of purpose essay.

**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) 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 30 units, 15 units of which must be in 600- and 700-level courses. Up to 15 units of coursework can be taken at the 500-level. The total program includes:

1. MALAS 601 (3).
2. MALAS 600A, 600B, 600C, or 600D in any combination (9 units). Each course may be repeated once with new content and, in excess of nine units, can be used for elective credit.
3. MALAS 799A (3): Thesis or Project.
4. 15 units of electives selected with approval of the MALAS director.

All programs must be approved by the MALAS director in consultation with the Graduate Liberal Arts and Sciences Committee.





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# Linguistics

In the Department of Linguistics and Asian/Middle Eastern Languages  
In the College of Arts and Letters

**OFFICE: Education and Business Administration 334**  
**TELEPHONE: 619-594-5268 / FAX: 619-594-4877**  
**<http://www.rohan.sdsu.edu/dept/linguist/index.html>**

## Faculty

Jeffrey P. Kaplan, Ph.D., Professor of Linguistics, Chair of Department  
Zev Bar-Lev, Ph.D., Professor of Linguistics, Emeritus  
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  
Eniko Csomay, Ph.D., Associate Professor of Linguistics  
Ryu Kitajima, Ph.D., Associate Professor of Japanese  
Ghada Osman, Ph.D., Associate Professor of Arabic  
Deborah Poole, Ph.D., Associate Professor of Linguistics  
Betty T. R. Samraj, Ph.D., Associate Professor of Linguistics  
Ruey-Juan Regina Wu, Ph.D., Associate Professor of Linguistics and  
Asian/Middle Eastern Languages  
Zheng-sheng Zhang, Ph.D., Associate Professor of Chinese  
Charlotte Webb, Ph.D., Associate Professor of Linguistics, Emeritus  
Gregory D. Keating, Ph.D., Assistant Professor of Linguistics  
Robert P. Malouf, Ph.D., Assistant Professor of Linguistics

## Associateships

Graduate teaching associateships in linguistics are offered each semester to a limited number of qualified students to teach the composition courses for international students. Those interested should send a letter of application to the graduate adviser.

## General Information

The Department of Linguistics and Asian/Middle Eastern 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.

**Jean Mark Gawron** – Computational linguistics (parsing, pragmatic narrowing, machine translation); semantics (quantification, anaphora, comparatives, lexical semantics).

**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.

**Zheng-sheng Zhang** – Chinese language structure (semantics, pragmatics, discourse analysis, dialects). Language pedagogy. Technology for language teaching.

## 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> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Linguistics and Asian/Middle East Languages.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682). 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 score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682). 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.

### Department of Linguistics and Asian/Middle Eastern Languages

The following materials should be mailed or delivered to:  
Department of Linguistics and Asian/Middle Eastern Languages (EBA-334)  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7727

- (1) 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 score of expertise;
- (2) Two letters of recommendation be sent directly from the recommenders (who can evaluate the applicant's academic potential) to the Department of Linguistics and Asian/Middle Eastern Languages 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 and Asian/Middle Eastern Languages 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.

For additional information, contact Yasmine Panahi at [ypanahi@mail.sdsu.edu](mailto: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 581 or Computer Science 581, 582, either 521 or 621, and six units selected from Linguistics 571, 596 (when offered with computational linguistics content), 620, 654, 681, 696 (when offered with computational linguistics content). The graduate electives should be approved by the graduate adviser. **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; Computer Science 550, 560, 562, 596 (when offered with computational linguistics content), 620, 650 (when offered with computational linguistics content), 696 (when offered with computational linguistics content), Rhetoric and Writing Studies 602; 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 Teaching English as a Second or Foreign Language (TESL/TEFL)

The Department of Linguistics and Asian/Middle Eastern Languages offers a Basic and an Advanced Certificate in Teaching English as a Second or Foreign Language (TESL/TEFL). 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*.

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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

Samuel S. P. Shen, 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, Emeritus  
Tunc Geveci, Ph.D., Professor of Mathematics  
Robert D. Grone, Ph.D., Professor of Mathematics  
(Associate Chair of Department)  
Stefen Hui, Ph.D., Professor of Mathematics  
(M.S. Applied Mathematics Graduate Adviser)  
F. David Lesley, Ph.D., Professor of Mathematics, Emeritus  
Joseph M. Mahaffy, Ph.D., Professor of Mathematics  
Peter Salamon, Ph.D., Professor of Mathematics  
(Coordinator and M.S. Applied Mathematics Graduate Adviser)  
Peter Blomgren, Ph.D., Associate Professor of Mathematics  
Ricardo Carretero, Ph.D., Associate Professor of Mathematics  
(M.S. Dynamical Systems Graduate Adviser)  
Stephen J. Kirschvink, Ph.D., Associate Professor of Mathematics  
Michael O'Sullivan, Ph.D., Associate Professor of Mathematics  
Antonio Palacios, Ph.D., Associate Professor of Mathematics  
Roxana N. Smarandache, Ph.D., Associate Professor of Mathematics  
J. Carmelo Interlando, Ph.D., Assistant Professor of Mathematics  
Vadim Ponomarenko, Ph.D., Assistant Professor of Mathematics  
(M.A. Mathematics Graduate Adviser)

### Mathematics Education

B. Ricardo Nemirovsky, Ph.D., Professor of Mathematics  
Janet Sue Bowers, Ph.D., Associate Professor of Mathematics  
Joanne Lobato, Ph.D., Associate Professor of Mathematics  
Chris L. Rasmussen, Ph.D., Associate Professor of Mathematics  
Susan D. 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, number theory, numerical analysis; 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.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials to SDSU Graduate Admissions.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

## 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. 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 Mathematics 623, 627A, 627B, and at least two courses in analysis chosen from courses Mathematics 630A, 630B, 631A, 631B.

3. Before entering the program, students should have completed the following courses or their equivalents: Mathematics 521B, 524, 532, 534B. If a student has not had these courses before entering the program, they must be taken during the first year. (A maximum of two of these courses may be applicable toward the degree course requirements.)
4. With departmental approval, students may select Plan A and complete Mathematics 799A or Plan B requiring a written comprehensive examination based on 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:

1. Have completed before entering the program, the following courses or their equivalents: Mathematics 524, 534A, 534B, 537, 541; Statistics 551A. At most one of these courses can be counted towards the degree course requirements. Programming proficiency in a computer language is also a prerequisite. 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.
2. Complete a minimum of 30 units of approved 500-, 600-, and 700-numbered courses. All programs must include at least 21 units in mathematical 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.
3. 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. 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.

# 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- " & \*  
e-mail: [mathsciphd@sdsu.edu](mailto: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, Emeritus  
Fred M. Goldberg, Ph.D., Professor of Physics  
Sandra P. Marshall, Ph.D., Professor of Psychology  
Cheryl L. Mason, Ph.D., Professor of Teacher Education  
B. Ricardo Nemirovsky, Ph.D., Professor of Mathematics  
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  
Alberto J. Rodriguez, Ph.D., Professor of Policy Studies in Language  
and Cross-Cultural Education  
Janet Sue Bowers, Ph.D., Associate Professor of Mathematics  
Alexander W. Chizhik, Ph.D., Associate Professor of Teacher  
Education  
Victoria R. Jacobs, Ph.D., Associate Professor of Teacher Education  
Lisa L. Lamb, Ph.D., Associate Professor of Teacher Education  
Chris L. Rasmussen, Ph.D., Associate Professor of Mathematics  
(Ph.D. Graduate Adviser)  
Rafaela M. Santa Cruz, Ph.D., Associate Professor of Teacher  
Education  
Susan D. Nickerson, Ph.D., Assistant Professor of Mathematics  
(M.A.T.S. Graduate Adviser)

## Committee for Mathematics Education

Nadine S. Bezuk, Ph.D., Professor of Teacher Education  
B. Ricardo Nemirovsky, 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  
Lisa L. Lamb, Ph.D., Associate Professor of Teacher Education  
Joanne Lobato, Ph.D., Associate Professor of Mathematics  
Chris L. Rasmussen, Ph.D., Associate Professor of Mathematics  
Rafaela Santa Cruz, Ph.D., Associate Professor of Teacher Education  
Susan D. Nickerson, Ph.D., Assistant Professor of Mathematics

## 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 must have passed a qualifying examination in mathematics education.

### Specific Requirements for the Master of Arts Degree for Teaching Service 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 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, 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, 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/msed>

#### General Information

San Diego State University and the University of California, San Diego, offer jointly a doctoral program in mathematics and science education. The program faculty at SDSU are members of the College of Sciences 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: Chris L. Rasmussen  
Staff Adviser: Deb Escamilla  
Doctoral Program Members: Bezuk, Chizhik, Feiler, Fisher, Goldberg, Jacobs, Lamb, Lobato, Marshall, Masarik, Mason, Nemirovsky, Nickerson, Oechel, Philipp, Rasmussen, Reed, Riggs, Rodriguez, Yerrick

#### University of California, San Diego:

Coordinator: Barbara Sawrey  
Graduate Adviser: Gabriele Wienhausen  
Staff Adviser: Caren Duncanson  
Doctoral Program Members: Appelbaum, Batali, Case, Cole, Churchland, Evans, Harel, Hutchins, Jones, Magde, Manaster, Mehan, Núñez, 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 quantitative, verbal, and analytic sections of the Graduate Record Examinations.

Students with a master's degree in mathematics education can also be considered for admission if they meet the following requirements: (a) a bachelor's degree in mathematics; (b) a master's degree in mathematics education that includes graduate level mathematics courses in analysis and algebra; and (c) coursework in geometry at the advanced undergraduate or graduate level. The GPA, GRE, and graduate standing requirements specified in the previous paragraph must also be met. Students entering the program with a master's degree in mathematics education are required to take additional mathematics courses as specified in "Specific Requirements for the Doctor of Philosophy Degree." Students with a master's degree in physics education, chemistry education, or biology education should contact the MSED program coordinators.

Students applying for admission to the doctoral program should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Mathematics and Science Education Ph.D. Program.

#### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

**Mathematics and Science Education**

The following materials should be delivered or mailed to:  
 Mathematics and Science Education Ph.D. Program  
 CRMSE, San Diego State University  
 6475 Alvarado Road, Suite 206  
 San Diego, CA 92120-5013

- (1) 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));
- (2) 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));
- (3) At least three letters of recommendation.

**Specific Requirements for the Doctor of Philosophy Degree**

(Major Code: 08997)

**Residency Requirements.** After formal admission to the doctoral program, the student must complete a 36-unit residency at the University of California, San Diego, of which a maximum of 12 units can be upper division undergraduate courses (100 level). Lower division undergraduate courses do not count toward residency. Students must also complete an 18-unit residency at San Diego State University. The residency requirements cannot be replaced by coursework taken elsewhere.

**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. Three research apprenticeship experiences:  
 SDSU: MSE 801, 802 *and*  
 SDSU: MSE 820 *or* UCSD: MSED 298.
- B. Core courses in Mathematics or Science Education.  
 UCSD: MSED 296A, 296B, 296C *and*  
 SDSU: MTHED 603.  
 Science Education students must also take SDSU: NSCI 600.  
 Mathematics Education students must select two of the following additional courses: SDSU: MTHED 604, 605, 606.
- C. Three courses on quantitative and qualitative research methods.  
 Select SDSU: MSE 810 *and* one of the following sequences:  
 UCSD: PSYC 201A, 201B *or*  
 UCSD: MA 282A, 282B *or*  
 SDSU: PSY 670A, 670B.
- D. Two courses in cognitive science at UCSD selected from:  
 COGS 102A *or* 234; COGS 102B, 200, 260; *or one of* COGS 101A, 101B, 101C.
- E. One teaching practicum.  
 SDSU: MSE 805, 806, *or* 807 *or*  
 UCSD: TEP 129A/139, *or* Discipline 500.
- F. Two courses from different categories are selected with advisers according to the student's needs and background.
  - (1) Philosophy and History. UCSD: PHIL 145, 146, 147, 209A; HISC 107, 108, 109, 160/260, 163/263, 164/264, *or* 165/265.
  - (2) Sociology. UCSD: SocG 270, SocB 117/TEP 117, *or* SocC 126/TEP 126.
  - (3) Mathematics and Science: Graduate level courses in biology, chemistry, mathematics, *or* physics.
  - (4) Teaching Experience: An option for students who have not yet had teaching experiences at both the K-12 and college levels is to take a second teaching practicum.
  - (5) Other. Other types of courses (at the graduate or upper division undergraduate level) can be approved by the advisers if they contribute to a coherent program.

G. Two doctoral research courses:

- SDSU: MSE 830 *and*  
 SDSU: MSE 899 *or* UCSD: MSED 299.

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.

**Additional Requirements for Students Entering with a Master's Degree in Mathematics Education.** Students who are admitted into the doctoral program with a master's degree in mathematics education will increase the breadth and depth of their mathematical knowledge by fulfilling the requirements specified for Option A *or* Option B:

**Option A.**

UCSD: MATH 240A, 240B, 240C *and*

Pass the UCSD comprehensive examination on analysis at the master's level *and*

One graduate algebra course: UCSD: MATH 200A *or* SDSU: MATH 627A *or* 623. MATH 623 can only be selected if the student has already taken a graduate level abstract algebra course.

**Option B.**

Select two of SDSU: MATH 627A, 627B, 623, *and*

Pass the SDSU comprehensive examination on algebra at the master's level *and*

UCSD: MATH 240A

Whether the student selects Option A or Option B, the year-long sequence in algebra or analysis must be taken in Year 1 of the doctoral program. All of the requirements for Option A or Option B must be completed prior to the second year examination; however, students are strongly encouraged to fulfill all of the requirements in Year 1. A grade of B or better must be earned in each course.

**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 (Offered through the College of Extended Studies)

The mathematics specialist certificate program, 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](mailto:nbezuk@mail.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 to include Mathematics 501A, 501B, 502A, 502B, 503A, 503B.
2. Six units to include Mathematics Education 571 and 572.

Requirements for the upper elementary mathematics specialist certificate (12 units):

1. Six units to include Mathematics 501A, 501B, 502A, 502B, 504A, 504B.
2. Six units to include Mathematics Education 573 and 574.

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.



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# 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](mailto:music.dance@sdsu.edu)

## Faculty

### Music

Donna M. Conaty, M.M., Professor of Music, Director of School  
Martin J. Chambers, M.M., Professor of Music (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  
Joseph Waters, Ph.D., Professor of Music  
Bill Yeager, M.M., Professor of Music  
Richard A. Helzer, M.F.A., Associate Professor of Music  
Felix Olschofka, M.M., Associate Professor of Music  
Richard Thompson, M.M., Associate Professor of Music  
Kevin M. Delgado, Ph.D., Assistant Professor of Music  
Todd Rewoldt, D.M.A., Assistant Professor of Music

### Applied Music Instruction

**Piano:** Darby, Follingstad, Kolar

**Harpichord:** Paul

**Organ:** Plimpton

**Voice:** Chambers, MacKenzie, Nikkel, Toral, Tweed

**Flute:** Bell, McGill, Payne

**Oboe:** Conaty

**Clarinet:** Liebowitz

**Saxophone:** Rewoldt, Rekevics

**Bassoon:** Martchev

**French Horn:** Lorge

**Trumpet:** Wilds

**Trombone:** Fellingner, Yeager

**Baritone Horn:** Dutton

**Tuba:** Dutton

**Percussion:** Flood, Holguin

**Violin:** Olschofka

**Viola:** Chen

**Cello:** Stauffer

**Contrabass:** Kurtz, Magnusson

**Harp:** Mashkovtseva

**Classical Guitar:** Benedetti, Romero, Svoboda, Wetzel

**Jazz Guitar:** Boss

**Composition:** Dutton, Waters

**Non-Western Instruments:** Specialists from specific cultures as available each semester

**Jazz Studies:** Helzer, Thompson, Yeager

**Opera:** Evans-O'Connor

### Dance

Melissa Nunn, M.A., Professor of Dance

Patricia R. Sandback, M.F.A., Professor of Dance

Joseph W. Alter, M.F.A., Associate Professor of Dance

Graham Hempel, M.A., Associate Professor of Dance

Leslie Seiters, M.F.A., Assistant Professor of Dance

## 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. The school also offers advanced coursework in dance which may be used toward fulfilling advanced degree requirements Interdisciplinary Studies and in other departments with the approval of the student's graduate adviser.

With approval of the school, students electing to pursue the Master of Arts degree may specialize in one of the following fields: ethnomusicology; 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; electro-acoustic composition; 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 300-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, 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

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.

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.

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.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Music and Dance.

#### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL or the CBTOEFL score for foreign students, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

#### School of Music and Dance

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

- (1) Two letters of reference;
- (2) A one-page statement of personal aims and goals.

### 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.

### 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

### 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: Three units.

#### Musicology

**Core:** Music 615, 652, 690.

**Program:** Music 611; three additional units from Music 652 or 653; nine units selected from Music 554, 590, 651 (1-4 units), 654; 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, 615, 654; 799A.

Electives: Three units.

#### Piano Pedagogy

**Core:** Music 613, 652, 690.

**Program:** Music 541, 542, 554, 554, 641, 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.

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.

### **Artist Diploma Advanced Certificate**

The artist diploma prepares preprofessional performance students for professional careers by giving focused instruction in all areas of performance including performing technique, interpretation, repertoire, performing experience, stage deportment and communication skills, and knowledge of the business of professional performance.

Applicants must show proof of completion of an undergraduate music degree from an accredited institution with a GPA or 3.0 in the last 60 semester (90 quarter) units attempted. Successful completion of an entrance audition and a review of undergraduate transcripts are required for entrance to this certificate program. Students whose undergraduate degree is not in music must complete entrance tests in music theory, history, and aural skills, in addition to the entrance audition. Students must enroll in this program as matriculated students.

Students must complete the following 24-unit curriculum: Music 515, 516 (2 units), 561-589 (4 units), 651 (8 units), 767; 798 (1 unit); four units to be selected from Music 507, 541, 542, 543, 554 (2-4 units), 566A-566B (for jazz studies students only), 590, 641, 766, or 1-3 additional units of 798. Vocal students must demonstrate competency equal to a college level course in French, German, and Italian.

The graduate certificate adviser will be responsible for verifying a student's satisfactory completion of the academic requirements established for the program and for forwarding a completed copy of the verification form to Graduate and Research Affairs. Additionally, this adviser will direct the student into elective coursework that best suits the needs of the individual student.

All units in this certificate program are applicable to the various specializations in the M.A. in Music and the M.M. degree programs. However, not all courses are required in each specialization. Please see the requirements for each graduate specialization listed in the *Graduate Bulletin*.

# Natural Science

In the College of Sciences

**OFFICE: Physics 131**

**TELEPHONE: 619-594-6240**

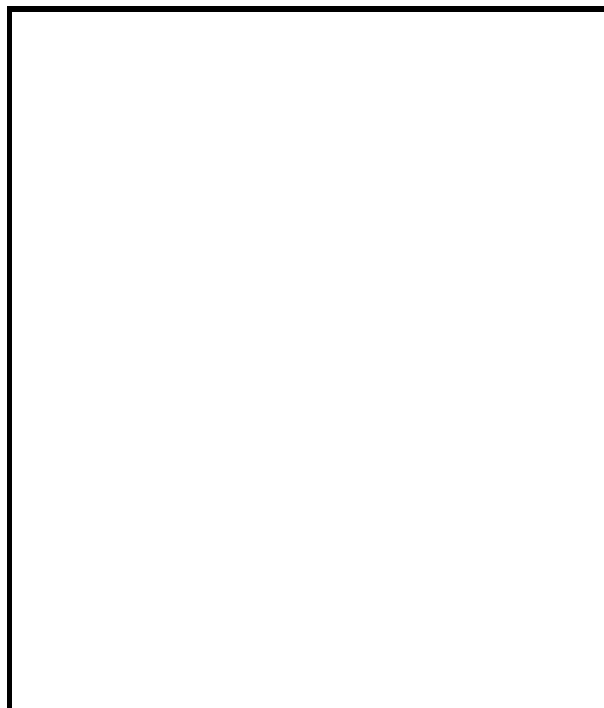
**Program Coordinator: Phoebe E. Roeder, Ph.D.**

## **Faculty**

Fred M. Goldberg, Ph.D., Professor of Physics

## **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.



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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**  
**<http://nursing.sdsu.edu>**

## Faculty

Catherine M. Toderò, Ph.D., Professor of Nursing, Director of School  
Janet L. Blenner, Ph.D., F.A.A.N., Professor of Nursing  
Diane C. Hatton, D.N.Sc., Professor of Nursing,  
Associate Director for Research  
Carolyn L. Walker, Ph.D., Professor of Nursing  
Caroline Brown, Ph.D., Associate Professor of Nursing  
Willa Fields, D.N.Sc., Associate Professor of Nursing  
Lorraine T. Fitzsimmons, D.N.S., F.N.P., Associate Professor of Nursing  
Sue A. Hadley, D.N.S., A.N.P., G.N.P., Associate Professor of Nursing  
Richard C. Reed, Ed.D., Associate Professor of Nursing  
Linda Robinson, Ph.D., Associate Professor of Nursing,  
Associate Director for Academic Programs  
Lembi Saarmann, Ed.D., Associate Professor of Nursing  
Jaynelle F. Stichler, D.N.Sc., Associate Professor of Nursing  
Lauren P. Hunter, Ph.D., C.N.M., Assistant Professor of Nursing  
Young-Shin Lee, Ph.D., Assistant Professor of Nursing  
Susan M. Yount, Ph.D., C.N.M., 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 nursing program will be prepared to function as middle or executive-level nursing administrators, nurse midwives, clinical nurse specialists, nurse practitioners, community based nurses/school nurses, and/or nurse educators. There are four concentrations: Community Health Nursing, Advanced Practice Nursing of Adults and the Elderly, Nursing Education, and Nursing Leadership in Health Care Systems. Students in the Community Health Nursing Concentration may specialize in Nurse Midwife, Nurse Midwife and Women's Health Care Nurse Practitioner, or School Nursing. Students in Advanced Practice Nursing of Adults and the Elderly are prepared as adult/geriatric nurse practitioners and clinical nurse specialists and may specialize in Acute Care/Critical Care. Students in the Nursing Education Concentration are prepared to practice in the academic and the clinical setting. 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.

*Applications for the Nurse Midwife/OB-GYN Nurse Practitioner and Advanced Practice Nursing of Adults and Elderly program (NP-CNS) are accepted for fall semester only. Applications received by January 15 will be given first priority admission.*

*Applications for Nursing Leadership in Health Care Systems are accepted for fall semester only. Applications received by May 1 will be given first priority admission.*

*Students for all other programs are admitted in the fall and spring semesters of each year. All applicants must electronically submit the university application and admissions materials to SDSU 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. One year of work experience as a registered nurse is preferred before starting concentration/specialization courses. 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. 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.)

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Nursing.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL or IELTS score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

**School of Nursing**

The following materials should be mailed or delivered to:

School of Nursing  
 (Attention: Graduate Adviser)  
 San Diego State University  
 5500 Campanile Drive  
 San Diego, CA 92182-4158

- (1) Departmental application to the School of Nursing available at <http://nursing.sdsu.edu/programs-ms-application.php>;
- (2) Submit three letters of recommendation attesting to capability to do graduate work in nursing;
- (3) Submit a personal statement;
- (4) Copy of California Registered Nurse license.

**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.

**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 at least 12 units of nursing courses listed on the official program of study with a minimum grade point average of 3.0 and be recommended by the graduate adviser.

**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 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**

Admission currently suspended for Community Health Nursing Concentration. Admission is open to the Specialization in Nurse Midwife and California OB/GYN Nurse Practitioner and School Nursing and to the Specialization in School Nursing.

**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

**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**

Graduates meet requirements for certification and licensure by the California Board of Registered Nursing. Graduates are eligible to sit for select national certification examinations. The program is accredited by the American College of Nurse Midwives and the Commission on Collegiate Nursing Education (CCNE). Part-time (3-4 years) and full-time (2 years) options of study are available. Required courses for the nurse midwife specialization 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 632 Community Health Nursing . . . . .	3
NURS 799A Thesis <i>OR</i> NURS 798 (Plan B) . . . . .	3
	6

**Specialization Courses**

NURS 501 Advanced Health Assessment and Health Promotion . . . . .	3
NURS 501L Advanced Health Assessment and Health Promotion Laboratory . . . . .	1
NURS 610 Pathophysiology in Adults and the Elderly . . . . .	3
NURS 636 Women's Health Assessment and Management I . . . . .	3
NURS 637 Women's Health/Nurse Midwifery Clinical Practicum I . . . . .	2
NURS 638 Nurse Midwifery Intrapartum and Newborn Assessment and Management II . . . . .	3
NURS 639 Women's Health/Nurse Midwifery Clinical Practicum II . . . . .	6
NURS 654 Advanced Practice Nursing: Primary Care I . . . . .	3
NURS 658 Clinical Pharmacology for Advanced Practice Nursing . . . . .	3
NURS 744 Women's Health/Nurse Midwifery Assessment and Management III . . . . .	3
NURS 745 Women's Health/Nurse Midwifery Clinical Practicum III . . . . .	6
	36

Total Semester Units 54

**Specialization as a Nurse Midwife and Women's Health Care Nurse Practitioner**

Graduates meet requirements for certification and licensure by the California Board of Registered Nursing. Graduates are eligible to sit for select national certification examinations. The program is accredited by the American College of Nurse Midwives and the Commission on Collegiate Nursing Education (CCNE). Part-time (3-4 years) and full-time (2 years) options of study are available. Required courses for the nurse midwife and women's health care nurse practitioner specialization 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 632 Community Health Nursing . . . . .	3
NURS 799A Thesis <i>OR</i> NURS 798 (Plan B) . . . . .	3
	6

**Specialization Courses**

NURS 501 Advanced Health Assessment and Health Promotion . . . . .	3
NURS 501L Advanced Health Assessment and Health Promotion Laboratory . . . . .	1
NURS 610 Pathophysiology in Adults and Elderly . . . . .	3
NURS 636 Women's Health Assessment and Management I . . . . .	3
NURS 637 Women's Health/Nurse Midwifery Clinical Practicum I . . . . .	2
NURS 638 Midwifery Intrapartum and Newborn Assessment and Management II . . . . .	3
NURS 639 Women's Health/Nurse Midwifery Clinical Practicum II . . . . .	6
NURS 654 Advanced Practice Nursing: Primary Care I . . . . .	3
NURS 658 Clinical Pharmacology for Advanced Practice Nursing . . . . .	3
NURS 744 Women's Health/Nurse Midwifery Assessment and Management III . . . . .	3
NURS 745 Women's Health/Nurse Midwifery Clinical Practicum III . . . . .	6
	36

Total Semester Units 54

**Community Health Concentration Courses**

	<i>Units</i>
NURS 631 Community Health Nursing Practicum . . . . .	3
NURS 632 Community Health Nursing . . . . .	3
NURS 799A Thesis <i>OR</i> NURS 798 (Plan B) . . . . .	3
	9

**Specialization Courses**

	<i>Units</i>
NURS 601 Assessment and Health Promotion of Children and Adolescents . . . . .	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
CSP 600 Cross-Cultural Counseling Communication Skills . . . . .	2
CSP 600L Cross-Cultural Counseling Prepracticum (Cr/NC) . . . . .	1
SPED 500 Human Exceptionality . . . . .	3
	19
Total Units	40

**Specialization as a Women's Health Care Nurse Practitioner**

Graduates meet requirements for certification and licensure by the California Board of Registered Nursing. Graduates are eligible to sit for select national certification examinations. The program is accredited by the Commission on Collegiate Nursing Education (CCNE). Part-time (3-4 years) and full-time (2 years) options of study are available. Required courses for the women's health care nurse practitioner specialization 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 632 Community Health Nursing . . . . .	3
NURS 799A Thesis <i>OR</i> NURS 798 (Plan B) . . . . .	3
	6

**Specialization Courses**

NURS 501 Advanced Health Assessment and Health Promotion . . . . .	3
NURS 501L Advanced Health Assessment and Health Promotion Laboratory . . . . .	1
NURS 610 Pathophysiology in Adults and Elderly . . . . .	3
NURS 636 Women's Health Assessment and Management I . . . . .	3
NURS 637 Women's Health/Nurse Midwifery Clinical Practicum I . . . . .	2
NURS 639 Women's Health/Nurse Midwifery Clinical Practicum II . . . . .	6
NURS 654 Advanced Practice Nursing: Primary Care I . . . . .	3
NURS 658 Clinical Pharmacology for Advanced Practice Nursing . . . . .	3
NURS 744 Women's Health/Nurse Midwifery Assessment and Management III . . . . .	3
NURS 745 Women's Health/Nurse Midwifery Clinical Practicum III . . . . .	4
	31

Total Semester Units 49

**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 a three unit audiometry course selected with approval of adviser. 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

## Advanced Practice Nursing of Adults and the Elderly Concentration

### Specialization in Acute/Critical Care Nursing

#### (Clinical Nurse Specialist and Nurse Educator Preparation)

All graduates meet requirements for clinical nurse specialist (CNS) certification in California and are eligible to sit for national CNS certification in acute/critical care or medical surgical nursing.

Required courses for the Master of Science degree with a concentration in advanced practice nursing of adults and the elderly and a specialization in acute/critical care nursing (CNS) and nurse educator preparation 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

#### Concentration Courses

	<i>Units</i>
NURS 501 Advanced Health Assessment and Health Promotion . . . . .	3
NURS 501L Advanced Health Assessment and Health Promotion Laboratory . . . . .	1
NURS 610 Pathophysiology in Adults and the Elderly . . . . .	3
NURS 658 Clinical Pharmacology for Advanced Practice Nursing . . . . .	3
NURS 799A Thesis <i>OR</i> NURS 798 (Plan B) . . . . .	3
	13

#### Specialization Courses

	<i>Units</i>
NURS 622 Quality Improvement and Program Evaluation in Nursing Systems Organizations . . . . .	3
NURS 644 Program and Curriculum Development in Nursing Education . . . . .	3
NURS 645 Teaching and Learning in Nursing Education . . . . .	3
NURS 646 Nursing Education Practicum . . . . .	3
NURS 751 Advanced Practice Nursing: Acute/Critical Care Theory and Technology . . . . .	3
NURS 753 Advanced Practice Nursing: Acute and Critical Care Practicum . . . . .	6
	21
Total Semester Units	46

#### (Nurse Practitioner and Clinical Nurse Specialist Preparation)

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 501 Advanced Health Assessment and Health Promotion . . . . .	3
NURS 501L Advanced Health Assessment and Health Promotion Laboratory . . . . .	1
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 <i>OR</i> 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 Education Concentration

Graduates of the nursing education concentration will be prepared for positions in academic and/or clinical settings. Required courses for the concentration 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

#### Area of Concentration Courses

NURS 644 Program and Curriculum Development in Nursing Education . . . . .	3
NURS 645 Teaching and Learning in Nursing Education . . . . .	3
NURS 646 Nursing Education Practicum . . . . .	3
NURS 799A Thesis <i>OR</i> NURS 798 (Plan B) . . . . .	3
Directed elective: Education focus . . . . .	3
	15

#### Advanced Clinical Content (students select one specialization)

1. Adult Health: NURS 500, 610, 658, 751 (13 units)
2. Maternal/Newborn: NURS 634, 640, 658, 742 (12 units)
3. Nursing Service Administration: NURS 620, 622, 624, P H 742B (12 units)

#### Total units for Master of Science in Nursing with Concentration in Nursing Education:

1. Adult Health: 40 units
2. Maternal/Newborn: 39 units
3. Nursing Service Administration: 39 units

**Nursing Leadership in Health Care Systems Concentration**

Required courses for the Master of Science degree with a concentration in nursing leadership in health care systems 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

**Area of Concentration Courses**

	<i>Units</i>
NURS 620 Foundations of Nursing Administration Practice . . . . .	3
NURS 622 Quality Improvement and Program Evaluation in Nursing Systems Organization . . . . .	3
NURS 624 Nursing Care Systems and Personnel Management . . . . .	3
NURS 724 Nursing Systems Administration Practicum . . . . .	3
NURS 725 Financial Management in Health Systems . . . . .	3
NURS 726 Advanced Nursing Systems Administration Practicum . . . . .	3
	18
Electives . . . . .	6
NURS 799A Thesis <i>OR</i> NURS 798 (Plan B) . . . . .	3
	39

**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.
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 601 Assessment and Health Promotion of Children and Adolescents . . . . .	4
NURS 631 Community Health Nursing Practicum . . . . .	3
NURS 632 Community Health Nursing . . . . .	3
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
CSP 600 Cross-Cultural Counseling Communication Skills . . . . .	2
CSP 600L Cross-Cultural Counseling Prepracticum (Cr/NC) . . . . .	1
SPED 500 Human Exceptionality . . . . .	3
Audiometry: Three unit course selected with approval of adviser . . . . .	3
	28

**Nursing Education Certificate**

The School of Nursing offers a curriculum leading to an Advanced Certificate in Nursing Education. The certificate program prepares nurses holding master's degrees in nursing for the educator role in academic or clinical settings.

Applicants seeking admission to the Advanced Certificate in Nursing Education must be admitted to the university and accepted as a classified postbaccalaureate student.

Satisfactory completion of the program requires an overall grade point average of 3.0 with individual course grades above 2.0.

For more information visit the School of Nursing Web site at <http://nursing.sdsu.edu>.

Students who enter the Advanced Certificate in Nursing Education and later decide they wish to transfer to the master's program in nursing education should consult with the graduate adviser. All courses in this certificate program are transferable to the master's degree in nursing education.

**Admission requirements**

1. Current California Registered Nurse license.
2. Master's degree in nursing.

**Program (12 units)**

	<i>Units</i>
NURS 644 Program and Curriculum Development in Nursing Education . . . . .	3
NURS 645 Teaching and Learning in Nursing Education . . . . .	3
NURS 646 Nursing Education Practicum . . . . .	3
Elective: Graduate level course with education emphasis selected with consent of adviser . . . . .	3



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# Nutritional Sciences

In the School 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

Janet C. Harris, Ph.D., Professor of Exercise and Nutritional Sciences,  
Director of School

Mark J. Kern, Ph.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

Mee Young Hong, 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 School 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 School of Exercise and Nutritional Sciences.

## General Information

The School 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.

## Admission to Graduate Study

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Exercise and Nutritional Sciences.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

## Master of Science Degree in Nutritional Sciences Master of Science Degree in Nutritional Science and Master of Science Degree in Exercise Physiology

The following materials should be mailed or delivered by February 1 for admission for the fall semester to:

School of Exercise and Nutritional Sciences  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7251

- (1) Two letters of recommendation;
- (2) Statement of purpose (1-2 pages describing applicant's background, research interests/experiences, and goals).

## 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 School 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 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 the Degree Curriculum

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. 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 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 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. 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. Also, students complete their degree by choosing either Plan A or Plan B. In Plan A, all students will include Nutrition 799A (thesis) for completion of their degree, accompanied by final oral examination on the field of the thesis and on the implications of the thesis research for the broader field of nutritional sciences is also required. If students select Plan B, Exercise and Nutritional Sciences 790 (Directed Readings) is required for completion of the degree.

The school 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 the Degree Curriculum

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 201, 302, 302L, 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.

#### 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. Also, students complete their degree by choosing either Plan A or Plan B. In Plan A, all students will include Nutrition 799A (thesis) or Exercise and Nutritional Sciences 799A (thesis) for completion of their degree, accompanied by a final oral examination on the field of the thesis and on the implications of the thesis research for the broader field of exercise and nutritional sciences. If students select Plan B, Exercise and Nutritional Sciences 790 (Directed Readings) is required for completion of the degree.

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

#### Plan A

NUTR 799A	Thesis (3) Cr/NC/RP
OR	
ENS 799A	Thesis (3) Cr/NC/RP

#### or Plan B

ENS 790	Seminar in Directed Readings (3) Cr/NC
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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.

The school 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.

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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

Todd W. Anderson, Ph.D., Associate Professor of Biology

Stephen A. Schellenberg, Ph.D., Assistant Professor of Geological  
Sciences

## 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, Construction, 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.)

## Courses Acceptable for Oceanography and Marine Studies

### Biology Courses (BIOL) Adviser: Anderson

BIOL 515 Marine Invertebrate Biology (4)  
BIOL 517 Marine Ecology (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 Geomorphology (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: Schellenberg

GEOL 540 Marine Geology (3)  
GEOL 545 Descriptive Physical Oceanography (3)  
GEOL 625 Paleogeology (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: Arts and Letters 446**

**TELEPHONE: 619-594-5263**

**<http://philosophy.sdsu.edu>**

## Faculty

J. Angelo Corlett, Ph.D., Professor of Philosophy

Darrel Moellendorf, Ph.D., Professor of Philosophy

Stephen L. Weber, Ph.D., Professor of Philosophy and  
University President

Thomas S. Weston, Ph.D., Professor of Philosophy

Peter C. Atterton, Ph.D., Associate Professor of Philosophy

Steven L. Barbone, Ph.D., Associate Professor of Philosophy  
(Graduate Adviser)

Deborah G. Chaffin, Ph.D., Associate Professor of Philosophy

Robert M. Francescotti, Ph.D., Associate Professor of Philosophy

Sandra A. Wawrytko, Ph.D., Associate Professor of Philosophy

Mark R. Wheeler, Ph.D., Associate 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> along with the \$55 application fee.

All applicants must submit admissions materials to SDSU Graduate Admissions.

## Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

## Department of Philosophy

The following materials should be mailed or delivered to:

Department of Philosophy  
(Attention: Steven L. Barbone)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-6044

- (1) Letters of recommendation and/or writing samples are optional (and recommended for applicants with lower grade point averages or GRE scores).

## Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as stated in Part Two of this bulletin.

In order to advance to candidacy, every graduate student must demonstrate proficiency in a language other than English. Appropriate languages may include both the formal languages of logic and mathematics and natural languages other than English (normally French, German, Greek, Latin, or Spanish). Students shall consult with the graduate adviser to determine which language is appropriate. Proficiency in a language shall be demonstrated by earning a grade of C or more in either (a) no fewer than two lower division courses in that language or (b) at least one upper division course in that language. All grades must be earned either while the student is a graduate student in the philosophy department or at an accredited college within five years prior to admission to the graduate program in philosophy. Appropriate examinations may be given when available.

## 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 but a maximum of 18 units in 600-numbered courses.

At the beginning of every fall semester, every graduate student must attend an orientation designed to familiarize students with the program and to facilitate community.

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.

As a requirement for graduation, every graduate student must orally present a paper to a public audience at SDSU. The paper must be based on work done by the student in the field of philosophy toward the satisfaction of his or her graduate degree requirements in the department. Students and the graduate adviser will arrange for the public presentation.

**Physical Education**

Refer to "Kinesiology" in this section of the bulletin.

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# Physics

In the College of Sciences

**OFFICE: Physics 131**  
**TELEPHONE: 619-594-6240 / FAX: 619-594-5485**  
**E-MAIL: [physdept@sciences.sdsu.edu](mailto:physdept@sciences.sdsu.edu)**  
**<http://www.physics.sdsu.edu>**

## Faculty

Usha S. Sinha, 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  
Patrick J. Papin, Ph.D., Professor of Physics and Associate Dean for  
Graduate and Research Affairs of the College of Sciences  
Stephen B. W. Roeder, Ph.D., Professor of Physics and Chemistry and  
Biochemistry, and Dean of the Imperial Valley Campus  
Alan R. Sweedler, Ph.D., Professor of Physics, Director of Center for  
Energy Studies, and Assistant Vice President for International  
Programs  
Milton S. Torikachvili, Ph.D., Professor of Physics  
Matthew E. Anderson, Ph.D., Associate Professor of Physics  
Arlette R.C. Baljon, Ph.D., Associate Professor of Physics  
Calvin W. Johnson, Ph.D., Associate Professor of Physics  
(Graduate Adviser)  
Fridolin Weber, Ph.D., Associate Professor of Physics  
Michael W. Bromley, 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 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, and image processing. Theoretical programs are available in condensed matter physics, electricity and magnetism, laser physics, nuclear and astrophysics.

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.

## Admission to Graduate Study

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Physics.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Department of Physics

#### Master of Arts Degree in Physics

#### Master of Science Degrees in Physics

The following materials should be mailed or delivered to:

Department of Physics  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1233

- (1) Letters of reference (two or three);
- (2) Application for teaching associate position or graduate assistantship (if desired).

#### Master of Science Degree in Radiological Health Physics

No new students are being admitted to this program. Students may apply to the MS or MA degree in physics. Students may also supplement their program of study with elective coursework in radiologic, medical, or health physics. Contact the Department of Physics for more information.

## Master of Arts Degree and Master of Science Degree in Physics

### Admission to the Degree Curriculum

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.

### 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

No new students are being admitted to this program. Students may apply to the MS or MA degree in physics. Students may also supplement their program of study with elective coursework in radiologic, medical, or health physics. Contact the Department of Physics for more information.

### Admission to the Degree Curriculum

All students must satisfy the general requirements for admission to the Division of Graduate Affairs with classified graduate standing, as described in Part Two of this bulletin under Admission to the Division of Graduate Affairs. 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, and Biology 561. Eighteen 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.

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# Political Science

In the College of Arts and Letters

**OFFICE: Nasatir Hall 127**

**TELEPHONE: 619-594-6244 / 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  
Farid Abdel-Nour, Ph.D., Associate 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  
Jonathan Graubart, Ph.D., Associate Professor of Political Science  
Lei Guang, Ph.D., Associate Professor of Political Science  
Carole Kennedy, Ph.D., Associate Professor of Political Science  
Kristen Hill Maher, Ph.D., Associate Professor of Political Science  
(Graduate Adviser)  
Madhavi M. McCall, Ph.D., Associate Professor of Political Science  
Brian E. Adams, Ph.D., Assistant Professor of Political Science  
Ahmet T. Kuru, Ph.D., Assistant Professor of Political Science  
Emanuelle G. Saccarelli, Ph.D., Assistant Professor of Political  
Science  
Ronnee D. Schreiber, Ph.D., Assistant Professor of Political Science  
Latha Varadarajan, 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

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. Currently, the department accepts applications for admission in the spring semester. The application deadline is November 1.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Political Science.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);



- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

**Department of Political Science**

The following materials should be submitted by November 1 for admission for the spring semester and April 1 for the fall semester to:

Department of Political Science  
 (Attention: Graduate Adviser)  
 San Diego State University  
 5500 Campanile Drive  
 San Diego, CA 92182-4427

- (1) Two letters of reference;  
 (2) Personal statement.

**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 18 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. Four 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 651 Seminar in Migration and Border Politics (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 six 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 six 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. Two 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 651 Seminar in Migration and Border Politics (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 six 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 six 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.

## **Political Science**

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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**

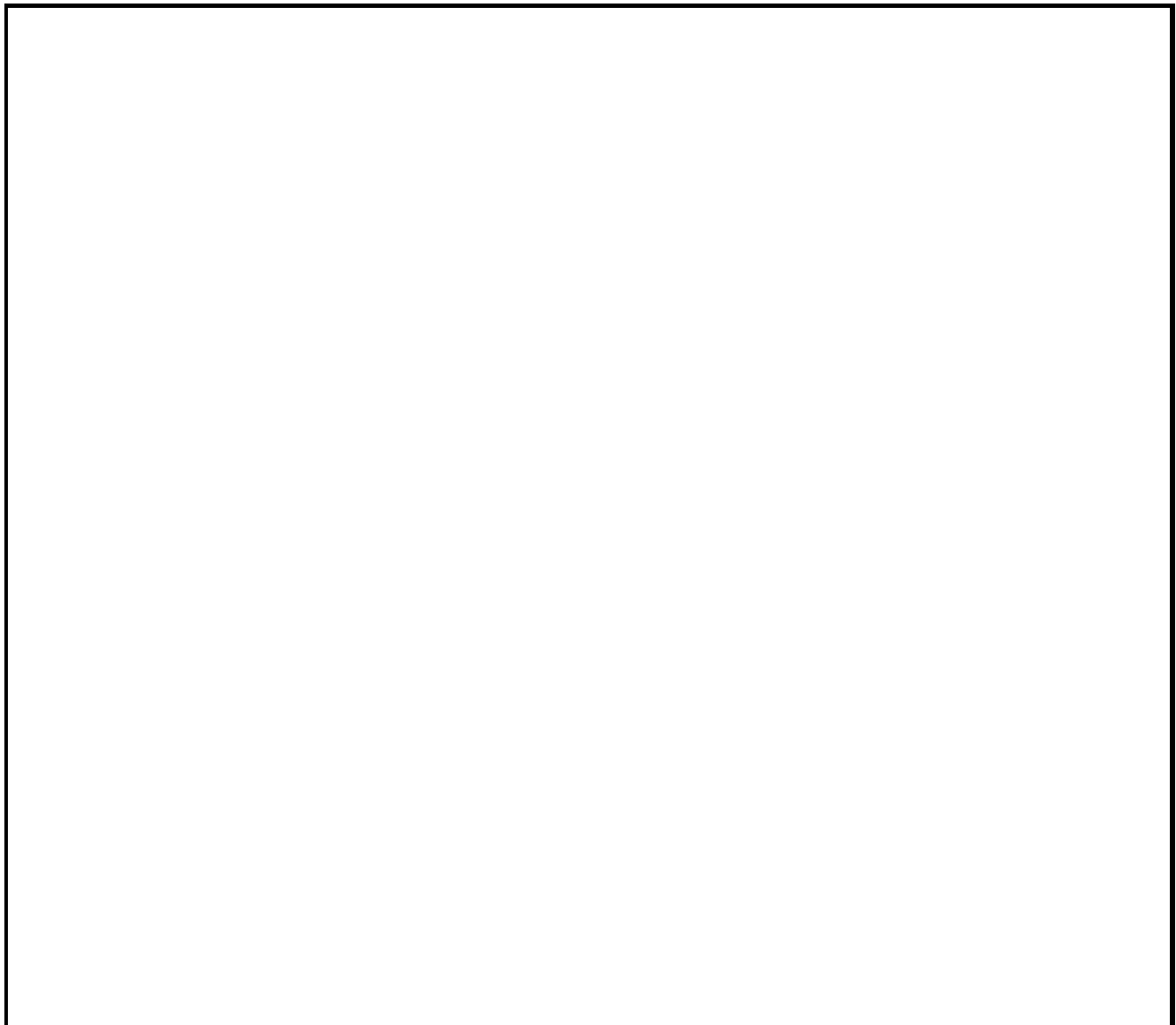
- POL S 516 Statistics for Political Scientists (3), or its equivalent.
2. POL S 601 Seminar in the Scope and Method of Political Science (3)
3. POL S 655 Seminar in General Comparative Political Systems (3)
4. POL S 675 Seminar in International Political Economy (3)
5. Two graduate seminars chosen from among the following:
  - POL S 651 Seminar in Migration and Border Politics (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 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 six 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 six 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.



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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

Georg E. Matt, Ph.D., Professor of Psychology,  
Chair of Department

Catherine J. Atkins, Ph.D., Professor of Psychology and Associate  
Dean for Academic and Faculty Affairs 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

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

Vanessa L. Malcarne, Ph.D., Professor of Psychology

Nancy A. Marlin, Ph.D., Professor of Psychology and  
University Provost

Sandra P. Marshall, Ph.D., Professor of Psychology

Robert F. McGivern, Ph.D., Professor of Psychology

Claire Murphy, 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 and Vice President  
for Research and Graduate Dean of the Office of Graduate and  
Research Affairs

Nader Amir, Ph.D., Associate Professor of Psychology

Donna Castañeda, Ph.D., Associate Professor of Psychology

Jeffrey M. Conte, Ph.D., Associate Professor of Psychology

Mark G. Ehrhart, Ph.D., Associate Professor of Psychology

Margaret Friend, Ph.D., Associate Professor of Psychology

Linda C. Gallo, Ph.D., Associate Professor of Psychology

Keith Hattrup, Ph.D., Associate Professor of Psychology

Sarah N. Mattson Weller, Ph.D., Associate Professor of Psychology

Ralph-Axel Mueller, Ph.D., Associate Professor of Psychology

Judy M. Price, Ph.D., Associate Professor of Psychology  
(Graduate Adviser)

Scott C. Roesch, Ph.D., Associate Professor of Psychology

Jennifer D. Thomas, Ph.D., Associate Professor of Psychology

Jean M. Twenge, Ph.D., Associate Professor of Psychology

Roberto J. Velasquez, Ph.D., Associate Professor of Psychology

May Yeh, Ph.D., Associate Professor of Psychology

Susan M. Brassler, Ph.D., Assistant Professor of Psychology

Elizabeth D. Cordero, Ph.D., Assistant Professor of Psychology

Thierry Devos, Ph.D., Assistant Professor of Psychology

Paul E. Gilbert, Ph.D., Assistant Professor of Psychology

Lisa Kath, Ph.D., Assistant Professor of Psychology

David M. Marx, Ph.D., Assistant Professor of Psychology

Pamela Moses, Ph.D., Assistant Professor of Psychology

Melody S. Sadler, Ph.D., Assistant Professor of Psychology

V. Robin Weersing, Ph.D., Assistant Professor of Psychology

## 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 physical and mental health research, 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.

## Admission to Master's and Doctoral Study

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Psychology.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

- (3) TOEFL or IELTS score, if medium of instruction was in a language other than English (for TOEFL see: <http://www.ets.org>; for IELTS see <http://www.ielts.org>; SDSU institution code 4682).

### Department of Psychology

Students applying to both the SDSU/UCSD joint doctoral program and the SDSU master's degree program are required to file only one university application and pay only one fee, which covers both programs. However, separate departmental applications, one for the master's program and one for the doctoral program, must be filed if the student wishes to be considered for both programs.

#### Master of Arts Degree in Psychology

#### Master of Science Degree in Psychology

The following materials should be mailed or delivered to:

Department of Psychology  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4611

- (1) Departmental application, which may be obtained at <http://www.psychology.sdsu.edu>;
- (2) Statement of purpose (see psychology Web site for details);
- (3) Completed application for an assistantship (if you are interested in this type of financial support);
- (4) Three letters of recommendation (in sealed and signed envelopes returned to the applicant) from persons familiar with the applicant's academic performance (see psychology Web site for recommendation forms).

#### Ph.D. Degree in Clinical Psychology

The following materials should be mailed or delivered to:

Selection Committee  
6363 Alvarado Court, #103  
San Diego, CA 92120-4913

- (1) Three letters of recommendation;
- (2) Joint doctoral program application.

## Section I. Master's Degree Programs

### Admission to the Degree Curriculum

Admission to the Department of Psychology master's program involves a two-step process. Applicants must file one application with the university, and a separate application package with the Department of Psychology.

To be considered for admission to the Department of Psychology 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. 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, 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, psychology of learning, or sensation and perception. Six units of upper division psychology electives, which may be from the above list, are also required.

2. 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, 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, psychology of learning, or sensation and perception. Six units of upper division psychology electives, which may be from the above list, are also required.
3. A grade point average of not less than 3.0 in all undergraduate coursework.
4. A minimum score above the 50th percentile rank on both the verbal and quantitative sections of the GRE General Test.
5. The GRE should be taken by November. 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.

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.

For admission to the university, all students must satisfy the general requirements for classified graduate standing, as described in Part Two of this bulletin.

**NOTE: Admission to the university does not guarantee admission to the Psychology Department.**

### Advancement to Candidacy

The student must satisfy the general requirements for advancement to candidacy as stated in Part Two of this bulletin. Having obtained three grades of C or lower in graduate courses automatically precludes advancement to candidacy.

In addition, students must have an approved thesis proposal prior to advancement to candidacy.

### General Requirements for all Master's Degree Programs

In addition to meeting the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete a graduate program of at least 30 units (36-38 units for the Master of Science degree). 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 provided 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 course from each of the following pairs of core courses: Psychology 740 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), and 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), and 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 (or University of California, San Diego, SOMC 205, Clinical Neuroanatomy), 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 the Degree Curriculum

(Major Code: 20031)

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.

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 the concentration in health promotion. 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 for the Ph.D. program must be received by the doctoral program office and the SDSU Office of Graduate Admissions not later than December 15.*

Detailed instructions for applying to the program, along with all necessary forms, are located on the SDSU/UCSD Joint Doctoral Program in Clinical Psychology Web page, 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).

#### 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 770A-770B, 775, 801, 820, 840, 849, 850, 855, 856, 860 (or UCSD Clinical Psychology 205 [Neuroanatomy]), 896, and UCSD Clinical Psychology 202E [Psychopathology]).

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) and Psychology 843 (Behavioral Medicine Seminar: Intervention), typically in the third year. Students taking experimental psychopathology are required to take Psychology 833 (Seminar in Developmental Psychopathology) and 852 (Seminar in Experimental Psychopathology Research), typically in the third year. Students in neuropsychology are required to take UCSD Clinical Psychology 205 (Neuroanatomy) and UCSD Clinical Psychology 294 (Seminar in Neuropsychology).

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, Revised, 2003) 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: Amir, Atkins, Calfas, Cronan, Elder, Gallo, Gilbert, Hovell, Klonoff, Litrownik, Malcarne, Marshall, Matt, Mattson, Mayer, Mueller, Murphy, Joseph Price, Reilly, Riley, Roesch, Sallis, Thomas, Weersing, Wulfbeck, Yeh

#### **University of California, San Diego:**

Program Director: Heaton

Program Members: Akshoomoff, Ancoli-Israel, Appelbaum, Atkinson, Bellugi, Bondi, Braff, Britton, G. Brown, S.A. Brown, S.J. Brown, Caligiuri, Carver, Cherner, Courchesne, Delis, Dimsdale, Drummond, Eyer, Feifel, Filoteo, Garland, Geyer, Gollan, Granholm, Grant, Haist, Jernigan, Jeste, L. Judd, P. Judd, Kelsoe, Kulik, Lang, Levine, Marcotte, Matloff, Max, McCabe, McQuaid, Mills, Myers, Nichols, Norman, Palinkas, Palmer, Parry, Patterson, Paulus, Penn, Perry, Rutledge, Salmon, Schreiber, Schuckit, Schuchter, Schweinsburg, Sieber, Sparta, Squire, Stein, Stiles, Strathdee, Swerdlow, Tapert, Taylor, Townsend, Trauner, Wall, Wetherell, Woods, Zhu, Zisook

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# Public Administration

In the School of Public Affairs

In the College of Professional Studies and Fine Arts

**OFFICE: Professional Studies and Fine Arts 100**  
**TELEPHONE: 619-594-6225 / FAX: 619-594-1165**

## Faculty

Stuart D. Henry, Ph.D., Professor of Public Affairs, Director of School

Roger W. Caves, Ph.D., Professor of Public Affairs  
(M.C.P. Graduate Coordinator)

James A. Gazell, Ph.D., Professor of Public Affairs

Lawrence A. Herzog, Ph.D., Professor of Public Affairs

Darrell L. Pugh, Ph.D., Professor of Public Affairs

Louis M. Rea, Ph.D., Professor of Public Affairs  
(M.P.A. graduate Coordinator)

L. Paul Sutton, Ph.D., Professor of Public Affairs

Susan E. Baer, Ph.D., Associate Professor of Public Affairs

Jeffrey S. McIlwain, Ph.D., Associate Professor of Public Affairs

Dana M. Nurge, Ph.D., Associate Professor of Public Affairs  
(M.C.J.C. Graduate Coordinator)

Sherry Ryan, Ph.D., Associate Professor of Public Affairs

Robert L. Stock, Ph.D., Associate Professor of Public Affairs

Shawn T. Flanigan, Ph.D., Assistant Professor of Public Affairs

Alan C. Mobley, Ph.D., Assistant Professor of Public Affairs

## General Information

The School of Public Affairs 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 School of Public Affairs' 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> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Public Affairs.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### School of Public Affairs

The following materials should be mailed or delivered to:

School of Public Affairs  
Master of Public Administration  
(Attention: Dr. Louis M. Rea)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4505

- (1) Two letters of reference from individuals who have known the student's academic work and/or employment performance.

## 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 3.0 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, 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:

CJ 601	Seminar in the Administration of Criminal Justice (3)
CJ 602	Seminar in Comparative Criminal Justice System (3)
CJ 603	Seminar in Community and Restorative Justice (3)
CJ 604	Seminar in Criminal Justice and Urban Administration (3)
CJ 605	Seminar in Juvenile Justice and Youth Violence (3)

### **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**

**(Offered through the College of Extended Studies)**

The purpose of the Certificate in Transborder Public Administration and Governance is to educate students in how U.S. and Mexico's 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. 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)

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 fees are associated with this program when taking courses through the College of Extended Studies. Additional information may be obtained from Dr. Stuart D. Henry.



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# Public Health

In the College of Health and Human Services

**OFFICE: Hardy Tower 119**  
**TELEPHONE: (619) 594-6317 / FAX: (619) 594-6112**  
**E-MAIL: [brenda.fass-holmes@sdsu.edu](mailto:brenda.fass-holmes@sdsu.edu)**  
**<http://publichealth.sdsu.edu>**

## Faculty

### Office of the Director

Carleen H. Stoskopf, Sc.D., Professor of Public Health,  
Director of School  
Caroline A. Macera, Ph.D., Professor of Public Health,  
Associate Director

### Epidemiology and Biostatistics

Stephanie Kay Brodine, M.D., Professor of Public Health, Division  
Head  
Caroline A. Macera, Ph.D., Professor of Public Health  
Donald J. Slymen, Ph.D., Professor of Public Health  
Elena S. H. Yu, Ph.D., M.P.H., Professor of Public Health  
John E. Alcaraz, Ph.D., Associate Professor of Public Health  
Louise K. Hofherr, Ph.D., M.P.H., Associate Professor of Public Health  
Ming Ji, Ph.D., Associate Professor of Public Health  
Richard A. Shaffer, Ph.D., M.P.H., Associate Professor of Public Health  
Hector Lemus, Dr.P.H., Assistant Professor of Public Health  
Suzanne P. Lindsay, Ph.D., M.P.H., Assistant Professor of Public Health  
Alfonso Rodriguez-Lainz, Ph.D., M.P.V.M., Research Associate  
Professor of Public Health  
Miguel Fraga, M.D., Adjunct Associate Professor of Public Health

### Health Promotion

Melbourne F. Hovell, Ph.D., M.P.H., Professor of Public Health,  
Division Head  
John P. Elder, Ph.D., M.P.H., Professor of Public Health  
Joni A. Mayer, Ph.D., Professor of Public Health  
Gregory A. Talavera, M.D., M.P.H., Associate Professor of  
Public Health  
Paula M. Usita, Ph.D., Associate Professor of Public Health  
Guadalupe X. Ayala, Ph.D., Assistant Professor of Public Health

### Health Services Administration

Robert L. Seidman, Ph.D., Associate Professor of Public Health,  
Division Head  
K. Michael Peddecord, Dr.P.H., Professor of Public Health, Emeritus  
Alma L. Koch, Ph.D., M.P.H., Professor of Public Health  
Stephen J. Williams, S.M., Sc.D., Professor of Public Health  
Tracy L. Finlayson, Ph.D., Assistant Professor of Public Health  
Nick Macchione, M.S., M.P.H., John J. Hanlon Executive Scholar  
David Lawrence, M.P.H., Research Assistant Professor of  
Public Health

### Occupational and Environmental Health

Richard M. Gersberg, Ph.D., Professor of Public Health,  
Division Head  
Ann de Peyster, Ph.D., Professor of Public Health  
P.J.E. (Jenny) Quintana, Ph.D., M.P.H., Associate Professor of  
Public Health  
M. Zohir Chowdhury, Ph.D., 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  
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

## 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.

## 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 concurrently with the Master of Social Work, the Master of Arts in Latin American Studies, or the Doctor of Medicine. The Ph.D. is offered in three concentration areas, to include epidemiology, health behavioral science with various specialization opportunities, and global health (see doctoral program); the M.P.H. with concentrations in the areas of biometry, environmental health, epidemiology, health promotion, and health services administration. The concentrations in the M.S. degree are in the areas of industrial hygiene and toxicology, and a specialization is offered in global emergency preparedness and response.

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 public health. 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 Health:** Identification, evaluation and control of chemical, biological and physical agents in the environment. Current emphasis is on U.S.-Mexico border issues and on applying emerging technologies to environmental programs.

**Epidemiology:** 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.

**Global Emergency Preparedness and Response:** Development of a unified framework for disaster epidemiology; research on appropriate development and relative effectiveness of training of public health workforce; advancement of evidence-based research in emergency/trauma preparedness and responsiveness; evaluation of the ability of local public health agencies to meet preparedness standards; and improvement of regional/national/international management of trauma and emergency care clinical services through communication and information management.

**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 for 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, the Center for Behavioral Epidemiology and Community Health, the California Distance Learning Health Network, and the Center for Injury Prevention Policy and Practice. For more information on these centers, see Part Four of this bulletin.

## Admission to Master's and Doctoral Study

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee as described in Part Two of this bulletin.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Graduate School of Public Health.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Master of Public Health Degree

#### Master of Science Degree in Public Health

The following materials should be mailed or delivered to:

Graduate School of Public Health  
(Attention: Coordinator for Admissions  
and Student Affairs)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4162

- (1) GSPH Application Parts I and II (includes narrative statement), <http://publichealth.sdsu.edu/gradapp.pdf>;
- (2) Three letters of recommendation (preferably academic);
- (3) Additional evidence of promise of success in academic and professional activities;
- (4) Document competence or prior academic preparation in the biological sciences, social sciences, and quantitative methods.

#### Master of Public Health Degree and Master of Arts Degree in Latin American Studies

The following materials should be mailed or delivered to:

Graduate School of Public Health  
(Attention: Coordinator for Admissions  
and Student Affairs)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4162

- (1) Complete the concurrent degree program application Parts I and II (includes narrative statement);
- (2) Three letters of recommendation;
- (3) Provide evidence of competence in or prior academic preparation in Latin American Studies, social and/or behavioral sciences, biological sciences, and/or health sciences;
- (4) Provide evidence of professional and academic activities related to Latin American Studies or the chosen area of concentration in the Graduate School of Public Health.

### Master of Social Work Degree and Master of Public Health Degree

The following materials should be mailed or delivered to:

School of Social Work  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4119

- (1) A narrative statement as described in Instructions for Applicants;
- (2) Three letters of recommendation.

### Ph.D. Degree in Public Health

The following materials should be submitted by December 15 for the fall semester to:

Graduate School of Public Health  
(Attention: Coordinator for Admissions  
and Student Affairs)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4162

- (1) Graduate School of Public Health application form, Parts I and II (includes narrative statement), <http://publichealth.sdsu.edu/phdapplication.php>;
- (2) Three letters of recommendation.

## Section I. Master's Degree Programs

### Master of Public Health Degree

#### Admission to the Degree Curriculum

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://publichealth.sdsu.edu>).

Applicants for the biometry concentration are required to have successfully completed undergraduate courses in single and multivariate calculus.

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 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 nine 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)

Prescribed Electives: Six units selected from the following public health courses:

- PH 649 Border and Global Public Health Surveillance (3)
- PH 700A Seminar in Public Health: Epidemiology (3)
- PH 722 Seminar in Clinical Trials (3)
- PH 724 Advanced Methods in Epidemiology (3)
- PH 823 Case-Control Studies (3)
- PH 824 Cohort Studies (3)
- PH 826 Analysis of Case-Control Studies (3)
- PH 827 Analysis of Cohort Studies (3)

Prescribed Electives: Six units selected from the following statistics courses:

- 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)

Electives: Three units to be selected with approval of concentration faculty from any public health or statistics course.

#### 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 Environmental and Disaster 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 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: Three units to 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 626 International Health Epidemiology Practicum (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 723 Genetic Epidemiology (3)
- PH 724 Advanced Methods in Epidemiology (3)
- PH 726 HIV/AIDS Epidemiology and Public Health (3)
- PH 823 Case-Control Studies (3)
- PH 824 Cohort Studies (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, 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 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

Electives: Six units to be selected with the approval of the faculty from any graduate level public health course.

### Concentration in Health Services Administration

#### Graduate Program in Health Services Administration (CAHME Accredited)

##### Specialization in Health Policy and Management

Courses required for the specialization:

PH 641	Introduction to Health Services (3)
PH 644	Health Services Organization and Management (3)
PH 645	Health Economics (3)
PH 647	Quantitative Methods and Health Data Analysis (3)
PH 648	Health Policy (3)
PH 650E	Field Practice: Health Services Administration (3)
PH 742A	Health Services Financial Management (3)
PH 742B	Health Insurance and Financing Systems (3)
PH 750E	Advance Field Practice: Health Services Administration (3)
PH 797	Research (3) Cr/NC/RP or
PH 799A	Thesis (3) Cr/NC/RP

Prescribed electives (nine 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 670	Public Health Law and Ethics (3)
PH 700E	Seminar in Public Health: Health Services Administration (3)
PH 743	Hospitals and Ambulatory Health Management (3)
PH 745	International Health Policy (3)
PH 747	Quality Improvement and Program Evaluation (3)
PH 748	Health Services Competitive Strategy and Marketing (3)

The remaining elective units may be selected with the approval of the adviser.

### Master of Science Degree in Public Health

#### Admission to the Degree Curriculum

The M.S. degree is offered with concentrations in industrial hygiene and toxicology, and a specialization in global emergency preparedness and response.

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 concentration, 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.

For industrial hygiene and toxicology concentrations, 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 or specialization, 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, specialization, 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 or specialization and are as shown below:

	Global Emergency Preparedness	Industrial Hygiene	Toxicology
Required	21	20	15
Prescribed electives	6	7	15
Electives	3	–	–
Field Practice*	–	3	–
PH 797 (Research)	3	3	3
PH 798+ or 799A (Thesis)	3	3	3
Total units:	36	36	36

\* A 3-unit field practice is mandatory for industrial hygiene students and may be taken as an elective by students in the toxicology concentration with approval of the academic adviser.

+ For students in global emergency preparedness and response not selecting PH 799A (Thesis).

#### Specific Requirements for Master of Science Degree Programs

##### Concentration in Industrial Hygiene

No new students are being admitted to this program.

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	Environmental and Disaster Medicine (3)
PH 639	Water Quality Investigation (3)
PH 700C	Seminar in Public Health: Occupational and Environmental Health (3)

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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 Environmental and Disaster 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 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.

### Specialization in Global Emergency Preparedness and Response

Courses required for the specialization (21 units)

PH 601 Epidemiology (3)  
PH 602 Biostatistics (3)  
PH 624 Emergency Preparedness and Response (3)  
PH 630 Environmental Health Risk Assessment (3)  
PH 649 Public Health Surveillance (3)  
PH 662 Motivating Health Behavior (3)  
PH 670 Public Health Law and Ethics (3)

Prescribed electives: A minimum of six units of coursework selected from the following list with approval of the faculty adviser.

PH 607 Research Methods and Proposal Writing (3)  
PH 621 Epidemiology of Infectious Diseases (3)  
PH 625 Control of Infectious Diseases (3)  
PH 627 Advanced Statistical Methods in Public Health (3)  
PH 635 Environmental and Disaster Medicine (3)  
PH 638A Principles of Toxicology (3)  
PH 639 Water Quality Investigation (3) Lab optional (1)  
PH 641 Introduction to Health Services (3)  
PH 663 Health Promotion Communications Theory and Design (3)

PH 738 Topics in Toxicology (3)

In special circumstances, the graduate adviser may approve one course not on the list of prescribed electives. The substitute must be approved prior to enrollment in the course. Students must get approval from their advisory committee and file a program of study after taking 12 units of core courses.

Electives: Three units selected with approval of faculty adviser. These electives may include any public health course or selections from the following:

ISCOR 575 Homeland Security (3)  
GEOL 505 Photogeology and Remote Sensing (3)

GEOL 600 Seminar: Collaborative Visualization (3)  
GEOL 600 Seminar: Sensor Networks (3)  
CSP 611 Seminar in Determinants of Human Behavior: Trauma (3) (Offered only in Extension)  
CSP 646 Seminar in Models and Methods of Intervening: Trauma (3) (Offered only in Extension)  
CSP 661 Seminar in Critical Incident and Crisis Interventions (3) (Offered only in Extension)

## Master of Public Health Degree and Master of Arts Degree in Latin American Studies

### General Information

The Graduate School of Public Health (GSPH) and the Center for Latin American Studies offer a concurrent graduate program leading to a Master of Public Health (MPH) in Epidemiology, Environmental Health, or Health Promotion and a Master of Arts (MA) in Latin American Studies. This concurrent program offers preparation in the fields of public health and Latin American studies for the purpose of promoting health, preventing disease, and enhancing the delivery of social and health services in Latino communities.

### Admission to the Degree Curriculum

To request information about the concurrent graduate program in Public Health and Latin American Studies, applicants should contact either the Graduate School of Public Health Director of the MPH/MA program, or the Latin American Studies Director of the M.A. program, San Diego State University. Students must meet the general requirements to graduate study at the university as detailed in Part Two of this bulletin. Application materials are also available from the GSPH Web site at <http://publichealth.sdsu.edu> or the Center for Latin American Studies Web site at <http://latinamericanstudies.sdsu.edu>.

### Advancement to Candidacy

All students must: (1) meet the general requirements for advancement to candidacy as described in Part Two of this bulletin; (2) pass an evaluation of progress towards the concurrent degree by both GSPH and Latin American Studies advisers; (3) complete all core courses in Public Health and Latin American Studies; (4) 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; (5) have been recommended for advancement by the combined faculty advisory committee; (6) have an approved concurrent program of study; and (7) have a thesis proposal approved by the combined faculty advisory committee, which must include at least one faculty member from Latin American Studies and one faculty member from Public Health.

Upon advancement to candidacy, the student will enroll in Public Health or Latin American Studies 797 (Research) and Public Health or Latin American Studies 799A (Thesis). All students in the concurrent degree program are required to complete a thesis. This thesis will incorporate theory, method, and analytic techniques from both Public Health and Latin American Studies. The thesis topic and chair will be determined by the student and the faculty advisory committee. All students must pass the American Council of Teachers of Foreign Language (ACTFL) oral proficiency examination in either Spanish or Portuguese with a score of 2.0 or above.

## Specific Requirements for the MPH/MA Degree

(Major Code: 12141/03081)

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 60 units as listed below. The 60 units include 37 units of general requirements and 23 units of public health concentration requirements.

### General Requirements

Total General Units = 37

Core Courses (16 units)	Prescribed Electives (15 units from at least two departments)			Culminating Experience (6 units)
P H 601 (3)	ANTH 508 (3)	HIST 640 (3)	POL S 566 (3)	P H 797 or LATAM 797 (3)
P H 602 (3)	ANTH 520 (3)	LATAM 550 (3)	POL S 567 (3)	P H 799A or LATAM 799A (3)
P H 604 (2)	ANTH 529 (3)	LATAM 560 (3)	POL S 568 (3)	
P H 605 (2)	ANTH 583 (3)	LATAM 580 (3)	POL S 661 (3)	
LATAM 600 (3)	ANTH 603 (3)	LATAM 696 (3)	POL S 667 (3)	
LATAM 601 (3)	ECON 565 (3)	LATAM 700 (3)	SOC 555 (3)	
	ECON 720 (3)	LATAM 795 (3)	SOC 740 (3)	
	HIST 551 (3)	LATAM 798 (3)	WMNST 512 (3)	
	HIST 552 (3)	POL S 564 (3)		

### Public Health Concentration Requirements

Total Units = 23

Students must complete one of the following concentrations.

#### Epidemiology Concentration

Total Epidemiology Units = 23

##### Required Courses (14 units)

P H 603 (2)  
P H 621 (3)  
P H 622 (3)  
P H 623 (3)  
P H 627 (3)

##### Prescribed Electives (6 units)

P H 625 (3) P H 722 (3)  
P H 626 (3) P H 723 (3)  
P H 628 (3) P H 724 (3)  
P H 649 (3) P H 726 (3)  
P H 700A (3) P H 823 (3)  
P H 721 (3) P H 824 (3)

##### Electives (3 units)

BIOL 585,  
NUTR 600, 606, 607, 700,  
STAT 510, 550, 551A, 560, 672, 677,  
or three units of electives to be selected  
with approval of the faculty advisory  
committee.

#### Health Promotion Concentration

Total Health Promotion Units = 23

##### Required Courses (15 units)

P H 607 (3)  
P H 661 (3)  
P H 662 (3)  
P H 663 (3)  
P H 666 (3)

##### Prescribed Electives (5 units)

P H 664 (3)  
P H 667 (3)  
P H 668 (3)  
P H 700F (3)  
P H 721 (3)  
P H 761 (3)  
P H 762 (3)

##### Electives (3 units)

Three units to be selected with the  
approval of the faculty advisory  
committee.

#### Environmental Health Concentration

Total Environmental Health Units = 23

##### Required Courses (17 units)

P H 603 (2)  
P H 632 (3)  
P H 634 (3)  
P H 636 (3)  
P H 638A (3)  
P H 639 (3)

##### Prescribed Electives (at least 6 units)

P H 630 (3)  
P H 635 (3)  
P H 637 (3)  
P H 700C (3)  
P H 721 (3)  
P H 732 (3)  
P H 737A (3)  
P H 737B (3)  
P H 738 (3)  
P H 798 (1-3)

## Master of Social Work Degree and Master of Public Health Degree

### 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 the Degree Curriculum

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 meet the general requirements for admission to graduate study at the university (see Part Two of this bulletin).

Applicants must 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

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science. Applicants must have 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.

A committee composed of faculty from Public Health and Social Work will make all admission recommendations to the dean of the Division of Graduate Affairs.

### 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 89 units.

#### Social Work/Public Health – Health Services Administration

SWORK 601	Seminar in Social Welfare Policy and Services (3)
SWORK 619	Human Behavior in the Social Environment (3)
SWORK 620A	Seminar in Human Behavior and Social Environment: Direct Practice (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 Selected Social Welfare Policy and Services (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 644	Health Services Organization and Management (3)
PH 645	Health Economics (3)
PH 647	Quantitative Methods and Health Data Analysis (3)
PH 648	Health Policy (3)
PH 742A	Health Services Financial Management (3)
PH 742B	Health Insurance and Financing Systems (3)
PH 797	Research (3) Cr/NC/RP

PH 799A or Thesis (3) Cr/NC/RP

SWORK 799A Thesis (3) Cr/NC/RP

Prescribed electives: Six units (three units each from Social Work and Public Health) selected with approval of faculty 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 registration in the course.

#### Public Health Prescribed Electives

PH 670	Public Health Law and Ethics (3)
PH 700E	Seminar in Public Health: Health Services Administration (3)
PH 743	Hospitals and Ambulatory Systems Management (3)
PH 745	International Health Policy (3)
PH 747	Quality Improvement and Program Evaluation (3)
PH 748	Health Services Competitive Strategy and Marketing (3)

#### Social Work

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.

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 of the requirements for the single degree program must then be met.

\* 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.

## Section II. Doctoral Program <http://publichealth.sdsu.edu>

A Ph.D. is offered in three concentration areas, epidemiology, global health, and health behavioral science.

### Ph.D. in Public Health with a Concentration in Epidemiology

(Major Code: 12141)

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 Global Health

(Major Code: 12141)

A Ph.D. in public health with a concentration in global health is offered by the joint faculties of the 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). Global health relates to health issues



and concerns that transcend national borders, class, race, ethnicity and culture, stresses the commonality of health issues and calls for a collective, partnership-based action to resolve these issues. Accordingly, emphasis is on preparing graduates with the fundamental knowledge, understanding, and specific skills necessary to become public health researchers and professional leaders in global health settings. Proximity to the U.S./Mexico border and expertise of many current faculty support and encourage a focus on infectious diseases (e.g., HIV, TB, STDs) and health of migrant populations, although students are expected to develop other areas of specialization within the Global Health concentration. These may be content areas, such as chronic/infectious disease surveillance and prevention, environmental health, health policy, substance abuse or methodological areas such as quantitative, qualitative and spatial research methodologies that are applied to address health problems of global health significance. In addition to didactic courses, students will be expected to meet specific cultural competencies relative to the overall field of global public health and to their dissertation area, and complete an international field practicum. Graduates of the program are competitive for a variety of research, teaching and service positions in academic institutions, governmental and non-governmental organizations, and businesses with global health interests within and outside of the U.S.

## Ph.D. in Public Health with a Concentration in Health Behavioral Science

(Major Code: 12143)

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 the Degree Curriculum

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.

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 Divisions of Graduate Affairs; (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. Degree

**Global Health:** Public Health 628, 649, 700A, 780, 781, 782, 800, 880, and the following courses offered at UCSD (nine units): FPM (Emerging/Re-Emerging Global Infectious Diseases, FPM (Practicum/Independent Study).

**Electives:** Six or more units in specialty area to include Public Health 784 and courses selected from other departments with the approval of the adviser.

**International Practicum:** Field Experience: 3-12 units

**Dissertation Research and Proposal:** 15 units

Students who do not possess an existing M.P.H. or M.S. degree in Public Health are required to take the following additional courses: Public Health 601, 602, and 627. Once the student is matriculated at SDSU, the final curriculum will be determined by the doctoral advising committee.

#### Course Requirements for Students with an Existing M.P.H. or M.S. Degree in Behavioral Science

**Health Behavioral Science:** 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.

### 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 Division of Graduate Affairs 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 Division of Graduate Affairs.

### 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 Criqui, 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., M.S., Adjunct Professor of Public Health, Associate Director

Robert A. 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

### 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. For specific questions concerning the Masters in Public Health degree, contact the coordinator of Admissions and Student Affairs at 619-594-4492.

**Macy Foundation/Synergistic Education in Public Health  
and Health Care**

Philip R. Nader, M.D., Professor of Pediatrics, UCSD, Research Professor of Public Health

**National Research Service Award Fellowship in  
Community Health**

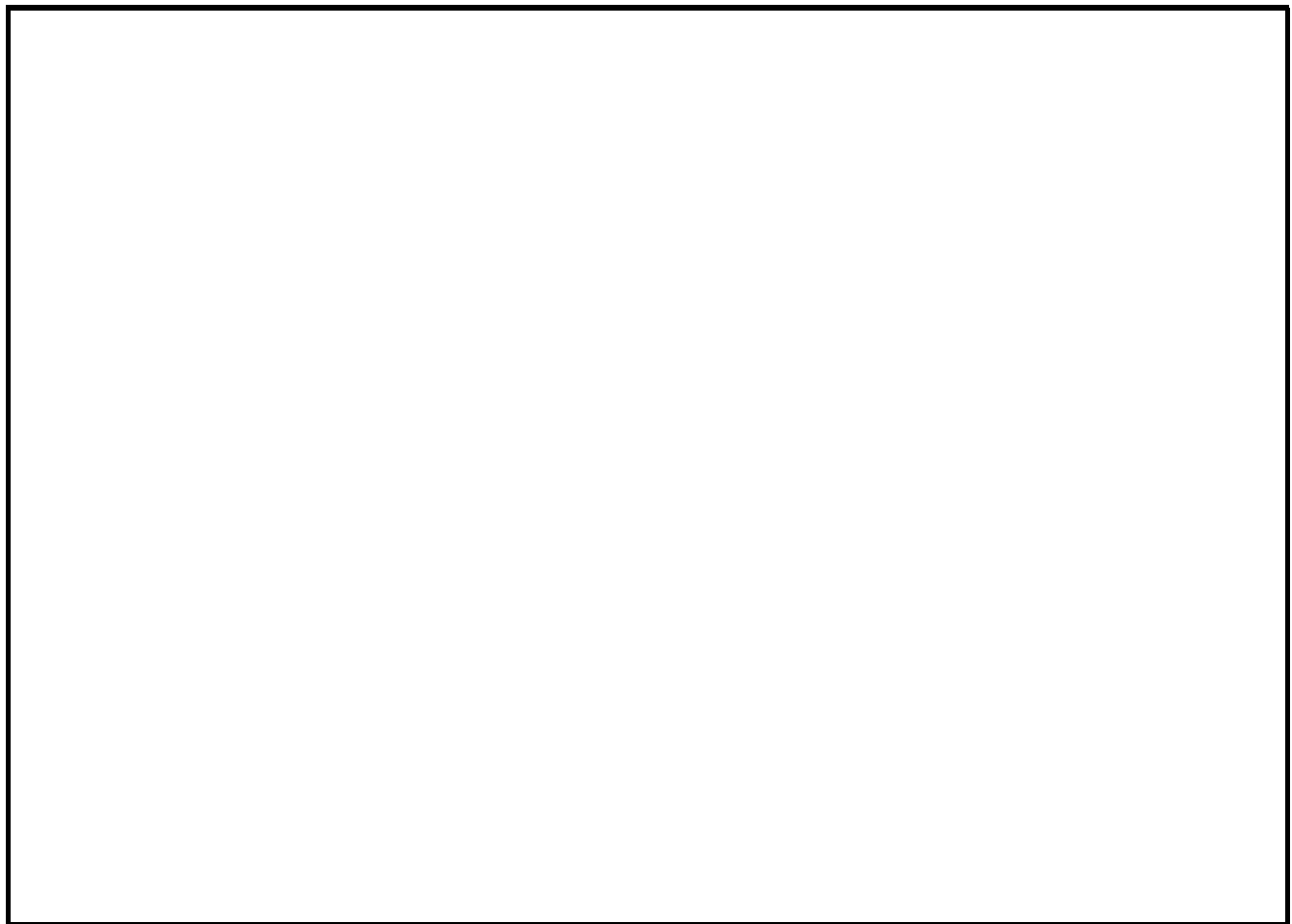
Philip R. Nader, M.D., Professor of Pediatrics, UCSD, Research Professor of Public Health

**Family Medicine Faculty Development Program**

Ellen L. Beck, M.D., Director of Community Education, Associate Clinical Professor of Epidemiology, UCSD

**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. For specific questions concerning the Masters in Public Health degree, contact the coordinator of Admissions and Student Affairs at 619-594-4492.



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# Regulatory Affairs

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

\*Stanley R. Maloy, Ph.D., Professor of Biology, Dean of the College of Sciences, Interim Director, Regulatory Affairs Program

\*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 Graduate Bulletin. 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.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Regulatory Affairs office.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Center for Bio/Pharmaceutical and Biodevice Development

The following materials should be mailed or delivered to:

Master of Science in Regulatory Affairs  
Director of Regulatory Affairs Programs, CBBD  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4610

- (1) Three letters of recommendation sent from persons who are knowledgeable about the candidate's potential for success in graduate study;
- (2) Applicant essay that describes the applicant's purpose in pursuing graduate studies in regulatory affairs and relationship to personal and career objectives;
- (3) 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 39 units as follows:

- Complete 24 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)
  - BA 651 Organizational Behavior (3)
  - BA 662 Operations Management (3)
  - IDS 705 Communication Strategies (3)
- Complete 12 units of electives, at least 9 units of which must be selected 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 FDA 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 781 Ethics for Healthcare Professionals (3)
- 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)
- IDS 744 Seminar in Lean Six Sigma Quality and Productivity Management (3)
- IDS 754 Seminar in Operations Strategy (3)

- Complete three units. Students must select Plan A or Plan B in consultation with the adviser. Students electing Plan A must complete Regulatory Affairs 799A (3) Cr/NC/RP. Students electing Plan B must select one additional course for three units in lieu of Regulatory Affairs 799A from the list of elective courses and pass a comprehensive examination.

## SDSU and California State University, East Bay Track

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 37 semester units including the Advanced Certificate in Regulatory Affairs at California State University, East Bay (16 quarter units equivalent to 10 semester units). In addition, the student must also complete a minimum of 27 units as follows:

- Complete 15 units of required courses.
  - RA 705 Project Planning for the Biomedical Industries (3)
  - RA 774 Investigational and Marketing Applications for Drugs, Biologics, and Medical Devices (3)
  - BA 651 Organizational Behavior (3)
  - BA 662 Operations Management (3)
  - IDS 705 Communication Strategies (3)
- Complete 12 to 15 units of electives selected from:
  - RA 696 Advanced Topics in Regulatory Affairs (1-4)
  - RA 771 Current Good Manufacturing Practices – Advanced Topics (3)
  - RA 772 Post-Approval Activities, Including FDA 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 781 Ethics for Healthcare Professionals (3)
  - RA 797 Research (1-3) Cr/NC/RP
  - RA 798 Special Study (1-3) Cr/NC/RP

- Complete three units. Students must select Plan A or Plan B in consultation with the adviser. Students electing Plan A must complete Regulatory Affairs 799A (3) Cr/NC/RP. Students electing Plan B must select one additional course for three units in lieu of Regulatory Affairs 799A from the list of elective courses and pass a comprehensive examination.

## 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 781. 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. Regulatory Affairs 781 will examine some of the most significant ethical issues confronting healthcare professionals. To enroll in this certificate program, call 619-594-5152.

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# Religious Studies

In the College of Arts and Letters

**OFFICE: Arts and Letters 662**

**TELEPHONE: 619-594-5185 / FAX: 619-594-1004**

**E-MAIL: [mbolthou@mail.sdsu.edu](mailto:mbolthou@mail.sdsu.edu)**

**<http://religion.sdsu.edu>**

## Faculty

Rebecca E. Moore, Ph.D., Associate Professor of Religious Studies,  
Chair of Department

Christopher Frost, Ph.D., Professor of Religious Studies and  
Associate Dean of the Division of Undergraduate Studies

Linda D. Holler, Ph.D., Professor of Religious Studies and  
Associate Dean of the College of Arts and Letters

Risa Levitt, Ph.D., Professor of Religious Studies

Khaleel Mohammed, Ph.D., Associate Professor of Religious Studies

Wilburn N. Hansen, Ph.D., Assistant Professor of Religious Studies

Sthaneshwar Timalisina, Ph.D., Assistant Professor of Religious  
Studies

Julius N. Tsai, 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.

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# Rhetoric and Writing Studies

In the College of Arts and Letters

**OFFICE: Adams Humanities 3138**

**TELEPHONE: 619-594-6515 / FAX: 619-594-6530**

## Faculty

Glen McClish, Ph.D., Professor of Rhetoric and Writing Studies,  
Chair of Department  
Cezar M. Ornatowski, Ph.D., Professor of Rhetoric and Writing Studies  
Linn K. Bekins, Ph.D., Associate Professor of Rhetoric and  
Writing Studies, Technical Writing Program Director  
Suzanne Bordelon, Ph.D., Associate Professor of Rhetoric and  
Writing Studies  
Richard B. Boyd, Ph.D., Associate Professor of Rhetoric and  
Writing Studies  
Ellen Quandahl, Ph.D., Associate Professor of Rhetoric and  
Writing Studies  
E. Jane Robinett, Ph.D., Associate Professor of Rhetoric and  
Writing Studies, Graduate Program Director  
Christopher Werry, Ph.D., Associate Professor of Rhetoric and  
Writing Studies, Lower Division Writing Director  
Paul A. Minifee, 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 graduate students. Teaching associates must have completed Rhetoric and Writing Studies 609, attend Rhetoric and Writing Studies 796A during the first semester of their associateship, and have the consent of the RWS GTA program director. Application forms and additional information are available 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, 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 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 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.

## 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.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Rhetoric and Writing Studies.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Department of Rhetoric and Writing Studies

The following materials should be mailed or delivered to:

Department of Rhetoric and Writing Studies  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4452

- (1) Letter of application;
- (2) A 750-1000 word statement of purpose;
- (3) A writing sample (minimum 10 pages total, in one or separate documents);
- (4) Three letters of recommendation.

## Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, including the foreign language requirement, as stated in Part Two of this bulletin. 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

(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	Reading and Writing Rhetorically (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 790	M. A. Examination Preparation (3) Cr/NC

**or**

RWS 799A	Thesis or Project (3) Cr/NC/RP
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*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* (21 units):

RWS 600	Reading and Writing Rhetorically (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

**or**

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 790	M. A. Examination Preparation (3) Cr/NC

**or**

RWS 799A	Thesis or Project (3) Cr/NC/RP
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*Electives* (9 units)

Nine units of thematically focused electives selected with the approval of the Department of Rhetoric and Writing Studies graduate adviser.

#### Specialization in Professional Writing

*Required courses* (24 units):

RWS 503	Professional Writing (3)
RWS 504	Advanced Professional Writing (3)
RWS 600	Reading and Writing Rhetorically (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)

**or**

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 790	M. A. Examination Preparation (3) Cr/NC

**or**

RWS 799A	Thesis or Project (3) Cr/NC/RP
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*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 the Teaching of Writing

Offered by the Department of Rhetoric and Writing Studies, the Advanced Certificate in the Teaching of Writing provides opportunities for teachers, scholars, and other professionals to expand their knowledge of rhetoric, expository texts, and composition instruction.

Applicants to the program must have completed a bachelor's degree from an accredited institution.

Students in the program must complete 12 units of coursework. 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.

*Required courses* (9 units):

RWS 509	Teaching Composition in Secondary Schools (3)
RWS 600	Reading and Writing Rhetorically (3)
LING 530	English Grammar (3)

*Electives* (3 units selected from):

RWS 601A	History of Rhetoric I (3)
RWS 602	Modern Rhetoric and Composition Studies (3)
LING 653	ESL Reading and Writing (3)

The certificate adviser in the Department of Rhetoric and Writing Studies is responsible for evaluating applications and advising students.

Up to 12 units of coursework taken as part of the certificate program, with the approval of the graduate adviser, may be applied to the Master of Arts degree in rhetoric and writing studies with a specialization in the teaching of writing.



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# Russian

In the Department of European Studies  
In the College of Arts and Letters

**OFFICE:** Education and 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.

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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  
Melinda M. Hohman, Ph.D., Professor of Social Work  
Loring P. Jones, D.S.W., Professor of Social Work  
Audrey M. Shillington, Ph.D., 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 and  
Associate Dean of the College of Health and Human Services  
Sally G. Mathiesen, Ph.D., Associate Professor of Social Work  
Jong Won Min, 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)

## Admission to Graduate Study

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Social Work.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Master of Social Work Degree

The following materials should be mailed or delivered to:

School of Social Work  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4452

- (1) Departmental application available at:  
<http://socialwork.sdsu.edu/applying.php>;
- (2) Letters of recommendation;
- (3) Personal statement.

### Master of Social Work Degree and Juris Doctor Degree

The following materials should be mailed or delivered to:

School of Social Work  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4452

- (1) Departmental application available at:  
<http://socialwork.sdsu.edu/applying.php>;
- (2) Letters of recommendation;
- (3) Personal statement;
- (4) Contact the Office of Admissions at California Western School of Law at 619-525-1463 for a separate application.

### Master of Social Work Degree and Master of Public Health Degree

The following materials should be mailed or delivered to:

School of Social Work  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4119

- (1) Submit a narrative statement as described in Instructions for Applicants;
- (2) Submit three letters of recommendation.

## Master of Social Work Degree

### General Information

The School of Social Work offers a 38-60 unit year accredited graduate program leading to a Master of Social Work (MSW) degree. Coursework is typically completed in one to four years. 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.

Students may earn the Master of Social Work degree in one of two ways described below. Students who have earned an undergraduate social work degree from an accredited university may be eligible to complete the requirements for the Master of Social Work degree via the 38 unit advanced standing program. All other students are required to complete the standard 60 units Master of Social Work program.

The goal of the Master of Social Work program is to enable advanced social work practitioners to provide services that assure people equal access to resources, programs, and opportunities; assist individuals in accomplishing life tasks, alleviating individual and social distress and realizing personal and societal aspirations. Because of its special geographic location in the Southern California border region, the school prepares 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 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 the Degree Curriculum

### General Admission Requirements

All applicants must file two separate applications: one to the Office of Enrollment Services to include transcripts, GRE scores, and TOEFL scores if applicable, 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.

### Advanced Standing Program Admission Requirements

The School of Social Work admits new students to the advanced standing program only in the summer each academic year. Applications are accepted between November 1 and January 15 of the preceding academic year.

Students admitted to the advanced standing program must possess an undergraduate degree in social work that was earned within five years of admission to the advanced standing program. The undergraduate degree must come from a program that is accredited by the Council on Social Work Education and the cumulative GPA for social work courses taken must be at least 3.0 (B or better).

Students not admitted to the advanced standing program may be considered for admission to the standard 60 unit program.

### Standard 60 Unit Master of Social Work Admission Requirements

The School of Social Work admits new students to the standard 60 unit Master of Social Work program only in the fall of each academic year. To be guaranteed a space in the two year program, new students must apply between November 1 and January 15 of the year before they desire entry. Applications received after the January 15 deadline but before April 1, will be considered for admission to the two, three, or four year programs if space is available. 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.

## Advancement to Candidacy

### Advanced Standing Program

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 satisfactorily completed the six unit foundation bridge courses (SWORK 670 and 671) with a minimum grade of B; (2) have earned at least 24 units of post-baccalaureate study with a minimum grade point average of 3.0 (B) and received a grade of satisfactory progress (SP) or credit (Cr) in four units of SWORK 750A or 750B; (3) have no incomplete grades; (4) be recommended by the faculty of the School of Social Work; (5) be approved for advancement by the Division of Graduate Affairs.

### Standard 60 Unit Master of Social Work Program

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 post-baccalaureate 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 Division of Graduate Affairs; (5) successfully pass a written qualifying examination given during the spring semester in which the student completes 31 units of 600-level coursework.

## Specific Requirements for the Master of Social Work Degree

(Major Code: 21041)

### Advanced Standing Program

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 38 unit course of study to include:

1. Six units in generalist/foundation bridge courses (SWORK 670 and 671);
2. Three units of computer applications for social work (SWORK 610);
3. 29 units of advanced study, to include:
  - a. 0-3 units of advanced human behavior (SWORK 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);
  - e. 14 units in a Social Work Methods Focus Area (Direct Practice or Administration).

Direct Practice	OR	Administration
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 completing Plan A may count Social Work 799A as three units of elective.

At least 30 units of the program must be completed in residence at San Diego State University. A maximum of six 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 consent 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.

### Standard 60 Unit Master of Social Work Program

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 to include:

1. 28 units in generalist/foundation bridge courses (SWORK 601, 619, 620A, 630, 631, 632, 650, 690);
2. Three units of computer applications for social work (SWORK 610);
3. 29 units of advanced study, to include:
  - f. 0-3 units of advanced human behavior (SWORK 720);
  - g. 3 units of advanced social policy (SWORK 702);
  - h. 3 units of advanced research methods (SWORK 791 or 797);
  - i. 6-9 units of social work electives (SWORK 758, 780, 781, 798, 799A);
  - j. 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 completing Plan A may count Social Work 799A as three 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 consent 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 containing policies and procedures not specified in this bulletin in addition to information to aid students in completing the MSW degree program. Students are responsible for the handbook on the Social Work homepage <http://chhs.sdsu.edu/sw>.

### Program of Study

#### Advanced Standing Program

The first nine units of the advanced standing program taken during the summer semester are organized around the generalist/foundation of social work practice. The final 29 units commencing in the fall are organized around a methods focus area. Students will select one of the methods focus areas.

#### Standard 60 Unit Master of Social Work Program

The standard 60 unit Master of Social Work program is organized in the first year around the generalist/foundation courses. 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 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 designing, implementing, and managing human service programs and on leading and improving human service organizations. Particular emphasis is placed on strategic planning, effective human service delivery technologies, the design of management systems, and implementing organizational change strategies leading to organizational effectiveness.

##### Field of Service

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 Degree 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 the Degree Curriculum

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.

### 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 702	Seminar in Social Welfare Policy and Services (3)
SWORK 720	Seminar in Selected Topics in Human Behavior and Social Environment (3)
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)
SWORK 750A (8)		SWORK 750B (8)

**California Western School of Law**

**(89 Units—Including 12 units transferred from the School of Social Work)**

- Civil Procedures I and II (2)
- 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 Degree and Master of Public Health Degree**

**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 the Degree Curriculum**

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 meet the general requirements for admission to graduate study at the university (see Part Two of this bulletin) and 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. A satisfactory score on the GRE General Test is required. Applicants already holding another master's degree or higher degree from an acceptable accredited graduate school are exempt from the GRE.

A committee composed of faculty from Social Work and Public Health will make all admission recommendations to the dean of the Division of Graduate Affairs.

**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 89 units as outlined below.

**Social Work/Public Health-Health Services**

**Administration**

- SWORK 601 Seminar in Social Welfare Policy and Services (3)
- SWORK 619 Human Behavior in the Social Environment (3)
- SWORK 620A Seminar in Human Behavior and Social Environment: Direct Practice (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 Selected Social Welfare Policy and Services (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 644 Health Services Organization and Management (3)
- PH 645 Health Economics (3)
- PH 647 Quantitative Methods and Health Data Analysis (3)
- PH 648 Health Policy (3)
- PH 742A Health Services Financial Management (3)
- PH 742B Health Insurance and Financing Systems (3)
- PH 797 Research (3) Cr/NC/RP
- PH 799A or Thesis (3) Cr/NC/RP
- SWORK 799A Thesis (3) Cr/NC/RP

Prescribed electives: Six units selected with approval of faculty 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 registration in the course.

**Public Health**

- PH 670 Public Health Law and Ethics (3)
- PH 700E Seminar in Public Health: Health Services Administration (3)
- PH 743 Hospitals and Ambulatory Health Management (3)
- PH 745 International Health Policy (3)
- PH 747 Health Quality and Program Evaluation (3)
- PH 748 Health Services Competitive Strategy and Marketing (3)

### Social Work

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.

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 of the requirements for the single degree program must then be met.

\* 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) 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](mailto:dfinnega@mail.sdsu.edu).

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# Sociology

In the College of Arts and Letters

**OFFICE: Nasatir Hall 203**

**TELEPHONE: 619-594-4826 / FAX: 619-594-1325**

**E-MAIL: [sociology@sdsu.edu](mailto:sociology@sdsu.edu)**

**<http://www.rohan.sdsu.edu/dept/sdsusoci/sociology.html>**

## Faculty

Sheldon X. Zhang, Ph.D., Professor of Sociology, Chair of Department

Brian K. Finch, Ph.D., Professor of Sociology

Bohdan Kolody, Ph.D., Professor of Sociology

Ruth Xiaoru Liu, Ph.D., Professor of Sociology

Norma Ojeda, Ph.D., Professor of Sociology

Jana L. Pershing, Ph.D., Professor of Sociology

Paul Wong, Ph.D., Professor of Sociology and Dean of the College of Arts and Letters

Jung Min Choi, Ph.D., Associate Professor of Sociology

Jill Esbenshade, Ph.D., Associate Professor of Sociology

(Graduate Adviser)

Henry E. Johnston, Ph.D., Associate Professor of Sociology

Paul W. Sargent, Ph.D., Associate Professor of Sociology

Kyra R. Greene, Ph.D., Assistant Professor of Sociology

Enrico A. Marcelli, Ph.D., Assistant Professor of Sociology

Michael A. McCall, Ph.D., Assistant Professor of Sociology

Michael J. Roberts, Ph.D., Assistant Professor of Sociology

## 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 semester. Application packages must be received and complete by the deadline. Deadlines are available on the university Graduate Division Web site.

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 30 units required for the degree.

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.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Sociology.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions

Enrollment Services

San Diego State University

San Diego, CA 92182-7416

- (1) One official transcript (in sealed envelopes) from each postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Department of Sociology

The following materials should be submitted to:

Department of Sociology

(Attention: Graduate Adviser)

San Diego State University

5500 Campanile Drive

San Diego, CA 92182-4423

- (1) Three letters of recommendation;
- (2) A personal statement;
- (3) A writing sample (preferably an academic paper). If this is not available, send an extended, three to five page personal statement;
- (4) Copy of transcript;
- (5) See application information on the Department of Sociology home page at <http://www.rohan.sdsu.edu/dept/sdsusoci/sociology.html>.

## 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 the first three courses of the core course series (Sociology 600, 601, 602). Students must have a 3.0 or better grade point average in their program courses and no less than a B- grade in each core course.

**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 30 units in the master's program. Students must complete the program of study courses with a grade point average of 3.0 or better. The 30 units to include the following courses:

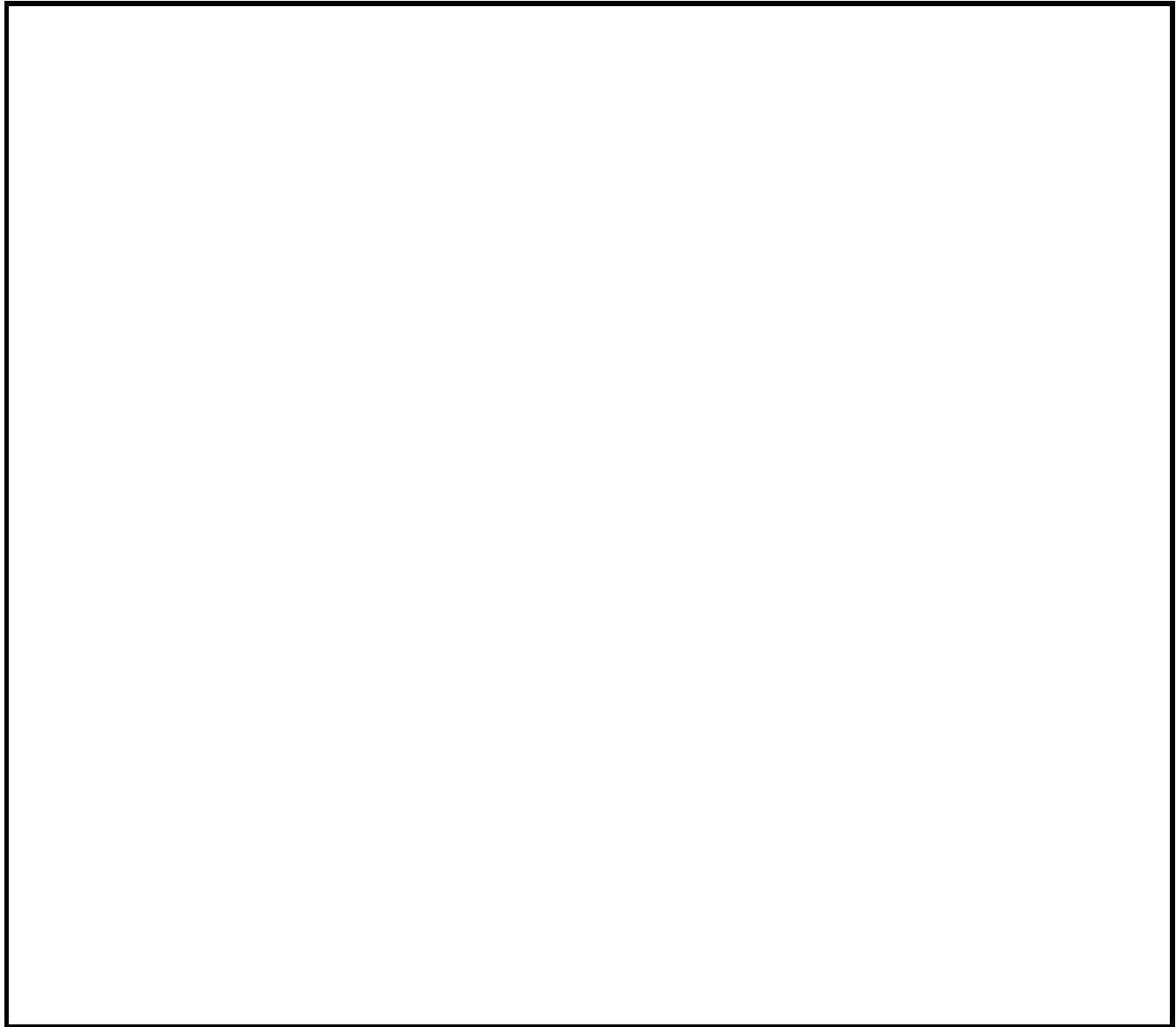
1. Five core courses: Sociology 600, 601, 602, 605, and either 607 or 608.
2. Two 700-level seminars in the Department of Sociology.

3. Two electives: 500 to 700-level courses in the Department of Sociology or another department with approval of the graduate adviser.

4. Sociology 799A Plan A (Thesis) or an additional 700-level sociology seminar or Sociology 710 or 796 if completing Plan B (Comprehensive Examination).

Students who are interested in applied sociology are encouraged to enroll in Sociology 607 and to take Sociology 796 as one of their electives.

Before the student proceeds with the thesis (Sociology 799A), approval from the thesis chair and second committee member must be obtained based on a detailed proposal. This proposal may be developed in Sociology 797 (which cannot count as a seminar) and may be used to fulfill the elective units. Once the thesis is completed, an oral defense is required to complete the program.





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# Spanish

In the Department of Spanish and Portuguese  
Languages and Literatures  
In the College of Arts and Letters

**OFFICE: Arts and Letters 134**  
**TELEPHONE: 619-594-6588 / FAX: 619-594-5293**

## Faculty

Claudia V. Angelelli, Ph.D., Professor of Spanish  
Margarita G. Hidalgo, Ph.D., Professor of Spanish  
Gail L. Robinson, Ph.D., Professor of Spanish  
Juan M. Godoy, Ph.D., Associate Professor of Spanish  
(Graduate Adviser)  
José Mario Martín-Flores, Ph.D., Associate Professor of Spanish  
William G. Acree, Ph.D., Assistant Professor of Spanish  
Liana Ewald, Ph.D., Assistant Professor of Spanish  
Peter P. Lindquist, Ph.D., Assistant Professor of Spanish  
Inigo A. Yanguas, 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. Applicants from other disciplines may be accepted at the discretion of the graduate admissions committee.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Spanish and Portuguese.

## Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

## Department of Spanish and Portuguese Languages and Literatures

The following materials should be mailed or delivered to:

Department of Spanish and Portuguese  
Languages and Literatures  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7703

- (1) Three letters of reference;
- (2) Statement of purpose.

## 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 to include Spanish 601, 602, 661, 770; Spanish 603 or 604; Spanish 605 or 606; and 12 units of electives selected in consultation with the graduate adviser.

Students may elect either Plan A, Thesis; or Plan B, Comprehensive Examination to meet the culminating experience requirement for the Master of Arts degree in Spanish.

All candidates must demonstrate knowledge of Portuguese by passing an examination administered by the department or by completing Portuguese 101 or 201.

# Speech, Language, and Hearing Sciences

In the College of Health and Human Services

**OFFICE: Speech, Language, and Hearing 118**

**TELEPHONE: 619-594-7746**

**FAX: 619-594-7109**

**<http://chhs.sdsu.edu/slhs/>**

## Faculty

- Beverly B. Wulfeck, Ph.D., Professor of Speech, Language, and Hearing Sciences, Director of School
- Jessica A. Barlow, Ph.D., Professor of Speech, Language, and Hearing Sciences (Graduate Adviser)
- Li-Rong Lilly Cheng, Ph.D., Professor of Speech, Language, and Hearing Sciences
- Karen D. Emmorey, 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 and Interim Dean for Division of Graduate Affairs
- Marilyn Newhoff, Ph.D., Professor of Speech, Language, and Hearing Sciences and Dean of the College of Health and Human Services
- Lewis P. Shapiro, Ph.D., Professor of Speech, Language, and Hearing Sciences
- Laura Dreisbach Hawe, Ph.D., Associate Professor of Speech, Language, and Hearing Sciences
- Julia L. Evans, Ph.D., Associate Professor of Speech, Language, and Hearing Sciences
- Tracy E. Love-Geffen, Ph.D., Associate Professor of Speech, Language, and Hearing Sciences
- Carol L. Mackersie, Ph.D., Associate Professor of Speech, Language, and Hearing Sciences
- Ignatius Nip, Ph.D., Assistant Professor of Speech, Language, and Hearing Sciences
- Sonja Pruitt, 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 program in speech pathology is accredited by the American Speech-Language-Hearing Association, the doctoral degree in audiology is currently an approved candidate for accreditation by the American Speech-Language-Hearing Association, and 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 speech, language, and hearing sciences, 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 Speech, Language, and Hearing 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 (SDSU 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 20 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://chhs.sdsu.edu/slhs/>, 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.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Speech, Language, and Hearing Sciences. *Incomplete applications will not be reviewed.*  
**Deadline for receipt: January 20**

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

#### School of Speech, Language, and Hearing Sciences

The following materials must be mailed or delivered and received by January 20:

School of Speech, Language, and Hearing Sciences  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1518

- (1) Submit the School of Speech, Language, and Hearing Sciences application available at <http://chhs.sdsu.edu/slhs/>;
- (2) Print a copy of the completed SLHS application and include with admission packet;
- (3) One applicant essay (guidelines available on school Web site);
- (4) Three recommendation forms in sealed and signed envelopes (forms available on school Web site);
- (5) Resume of experiences applicable to this field (optional).

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, 300, 305, 320, 321, 340, 340L, 511, 512, 513, 514, 580; Psychology 260; Psychology 270 or Sociology 201 (or equivalent coursework in these areas).

**Graduate Program.** Students must complete a minimum of 43 units. The following core courses are required: Speech, Language, and Hearing Sciences 570, 600, 605, 606, 607, 608, 609A, 609B, 613, 614, 617, 673, 675. In addition, students must complete six units from Speech, Language, and Hearing Sciences 707, 750, 754, 790, 793, 794, 795, 797, 798, 799A, and Psychology 732.

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 to the Master of Arts degree. Admissions are only being granted for the doctoral program in audiology (Au.D.). See Audiology in this section of the bulletin for additional information.

#### C. Concentration in Education of the Deaf.

No new students are being accepted. For further information, contact the School of Speech, Language, and Hearing Sciences.

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 300, 305, 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 600A, 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, 300, 305, 320, 321, 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 Asian/Middle Eastern 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 Asian/Middle Eastern Languages), Emmorey (Speech, Language, and Hearing Sciences), Fenson (Psychology), Friend (Psychology), Gutierrez-Clellen (Speech, Language, and Hearing Sciences), Love-Geffen (Speech, Language, and Hearing Sciences), Mueller (Psychology), Newhoff (Speech, Language, and Hearing Sciences), Reilly (Psychology), Shapiro (Speech, Language, and Hearing Sciences), Wulfbeck (Speech, Language, and Hearing Sciences).

**University of California, San Diego:** Ackerman (Linguistics), Bellugi (Salk Institute, Psychology), Carver (Psychology), Elman (Cognitive Science), Ferreira (Psychology), Kritchevsky (Neurosciences), Kutas (Cognitive Science), Mayberry (Linguistics), Moore (Linguistics), Padden (Communications), Swinney (Psychology), Townsend (Neuroscience), 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 will be admitted to the doctoral program only in the fall semester/quarter. Applications and all other supporting materials must be received (not postmark) by January 20 to be considered for the doctoral program beginning in the following fall semester/quarter.

### Application Guidelines for the SDSU/UCSD Joint Doctoral Program in Language and Communicative Disorders

To be admitted to the Joint Doctoral Program, applicants must electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the SDSU/UCSD Joint Doctoral Program.

#### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

#### Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);

- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

**SDSU/UCSD Joint Doctoral Program**

The following materials should be submitted in a single envelope by January 20 to:

SDSU/UCSD Joint Doctoral Program in  
Language and Communicative Disorders  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1518

- (1) Departmental application form (<http://chhs.sdsu.edu/slhs/>);
- (2) Statement of purpose;
- (3) Three letters of recommendation (<http://chhs.sdsu.edu/slhs/>) in individually sealed envelopes;
- (4) Publication reprints or presentation abstracts, if available.

**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.

The *Foundations* requirement consists of three courses on normal language and three courses on disorders of language.

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 Divisions of Graduate Affairs 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 600A; 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 speech, language, and hearing sciences 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, 546, 618A, 618B, 626A, 626B, 626C, 627, 929, 933. In addition, students must complete at least one of the following courses: Speech, Language, and Hearing Sciences 521, 522, 619, or 676.
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 speech, language, and hearing sciences 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, 626A, 627, 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 *Graduate Bulletin*. The certificate is limited to those languages for which there is an available clinical population. Consult the certificate coordinator for approved languages.

The certificate program requires completion of 13 units including nine units of substantive coursework (upon approval of the certificate coordinator) 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. With the approval of the school, a student may apply coursework from the certificate program toward 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

Samuel S. P. Shen, Ph.D., Professor of Mathematics,  
Chair of Department  
Kung-Jong Lui, Ph.D., Professor of Statistics, (Statistics Coordinator  
and Graduate Adviser for the M.S. in Statistics with Concentration  
in Biostatistics)  
Juanjuan Fan, Ph.D., Associate Professor of Statistics  
Richard A. Levine, Ph.D., Associate Professor of Statistics  
Chii-Dean Lin, Ph.D., Associate Professor of Statistics  
(Graduate Adviser for the M.S. in Statistics)  
Barbara Ann Bailey, Ph.D., Assistant Professor of Statistics  
Jianwei Chen, Ph.D., Assistant Professor of Statistics  
Kristin A. Duncan, 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)**

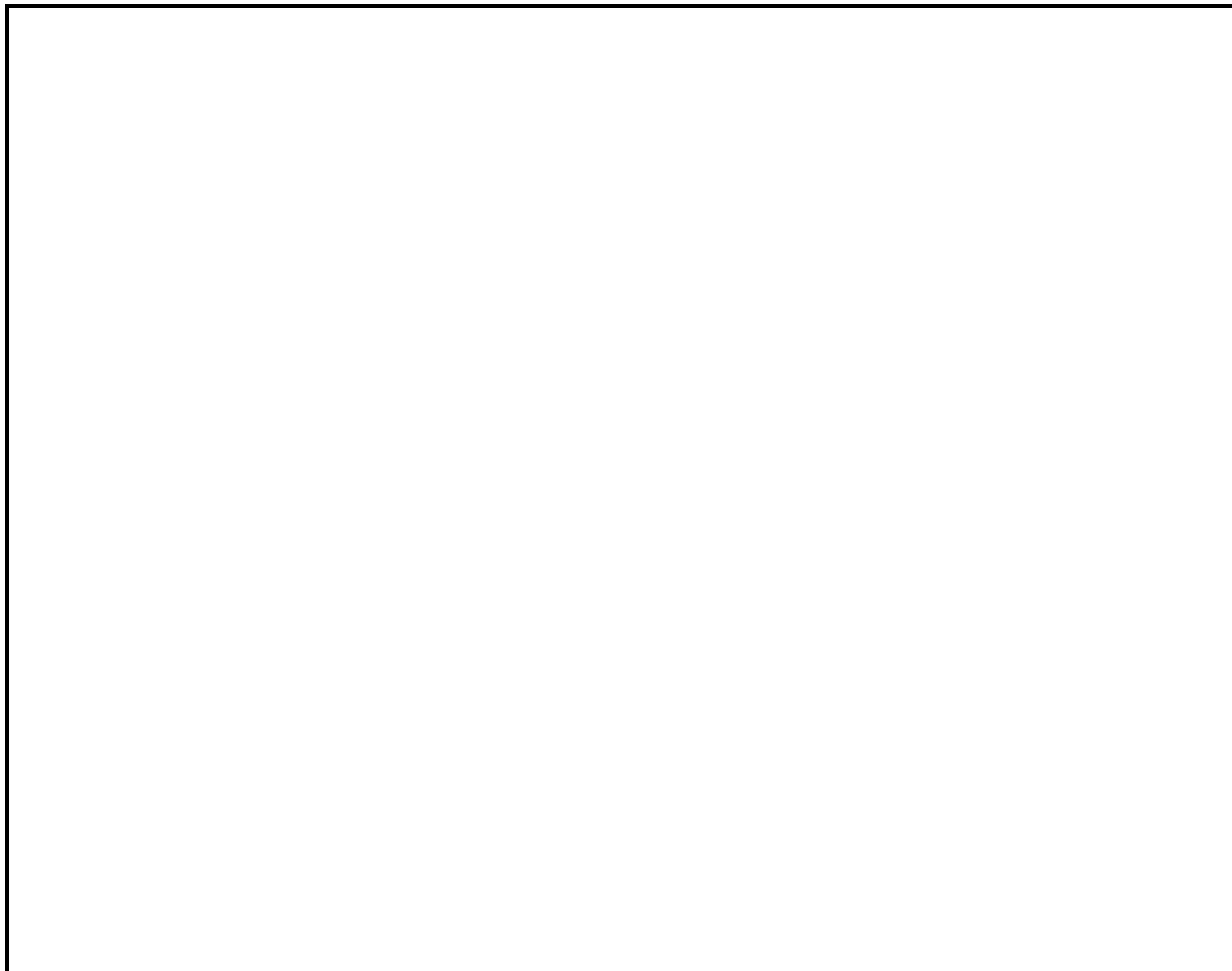
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must meet the following program requirements:



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.



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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

Randy Reinholz, M.F.A., Professor of Theatre, Television, and Film,  
Director of School  
Gregory C. Durbin, M.F.A., Professor of Theatre, Television, and Film  
(Graduate Adviser)  
Martha M. Lauzen, Ph.D., Professor of Theatre, Television, and Film  
Jack Ofield, Professor of Theatre, Television, and Film,  
Filmmaker in Residence  
Mark W. Freeman, M.F.A., Associate Professor of Theatre, Television,  
and Film  
Timothy A. Powell, Ph.D., Associate Professor of Theatre, Television,  
and Film  
David A. Morong, M.F.A., Assistant Professor of Theatre, Television,  
and Film  
Louisa E. Stein, 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 305 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 stresses hands-on creative endeavor. It 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 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; production design and art direction; international cinema; 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 reel of previous creative activity or other evidence of relevant creative activity. Postbaccalaureate students who are without previous media production education or experience and who wish to learn television and film production should consider pursuing a second bachelor's degree in media production or completing basic production courses elsewhere before enrolling in graduate study at San Diego State University.

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 semester only. Application packages must be received and complete by the previous March 1.

In addition to meeting the general requirements for admission to the university with classified graduate standing, as outlined in Part Two of this bulletin, students applying for admission to the Master of Arts degree in television, film and new media production are evaluated according to the following criteria:

1. Undergraduate major or minor in television, film, or a related communication discipline. Those lacking adequate undergraduate preparation or equivalent professional experience for the program should consider enrolling in media courses at community colleges or in intensive craft training programs before applying to the television, film and new media production program.

2. Minimum grade point average of 3.0 (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.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Theatre, Television, and Film.

#### **Graduate Admissions**

The following materials should be submitted together directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

#### **School of Theatre, Television, and Film**

The following materials should be submitted by March 1 for the fall semester to:

School of Theatre, Television, and Film  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7601

- (1) 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;

- (2) A resume that includes any film and/or video production experience you have had;
- (3) The best evidence applicant can provide of creativity relevant to media productivity, technical skill level, and command of the medium. Generally, a sample reel is the most useful. The sample reel should be a DVD (NTSC, region 0 or 1) 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);
- (4) A list, by author and title, of six books (novels, plays, essays) that have influenced applicant artistically;
- (5) A list of three films (narratives, documentaries, experimental), plays or television programs that applicant admires, devoting one paragraph to each work;
- (6) A list and description (in a sentence) of applicant's hobbies and interests outside of film, video, and theatre;
- (7) 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 to include the following:

1. Television, Film and New Media 799A (Plan A, the thesis option, is required of all students in the program), Television, Film and New Media 600 (required for classified graduate standing), 615, and 660.
2. With approval of the graduate adviser, 18 additional graduate units in Television, Film and New Media, 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.

# Theatre Arts

In the School of Theatre, Television, and Film  
In the College of Professional Studies and Fine Arts

**OFFICE: Dramatic Arts 204**  
**TELEPHONE: 619-594-6363 / FAX: 619-594-7431**  
**<http://tff.sdsu.edu>**

## Faculty

Randy Reinholz, 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  
Anne-Charlotte Harvey, Ph.D., Professor of Theatre, Emeritus  
Paula Kalustian, M.F.A., Professor of Theatre, Television, and Film  
(Graduate Adviser)  
Peter F. Larlham, Ph.D., 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  
Peter J. Cirino, M.F.A., Associate Professor of Theatre, Television,  
and Film  
Margaret C. Larlham, M.A., Associate Professor of Theatre, Television,  
and Film  
Danielle J. Bedau, M.F.A., Assistant Professor of Theatre, Television,  
and Film  
Donald J. Hopkins, Ph.D., Assistant Professor of Theatre, Television,  
and Film  
Rick A. Simas, Ph.D., Musical Theatre Specialist

## 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.).

## Admission to Graduate Study

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Theatre, Television, and Film.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Master of Arts Degree in Theatre Arts

The following materials should be mailed or delivered to:

School of Theatre, Television, and Film  
(Attention: M. A. Program)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7601

- (1) Three current and relevant letters of recommendation from individuals familiar with the applicant's academic ability.

### Master of Fine Arts Degree in Theatre Arts Concentration in Acting

No students admitted to program at this time.

### Master of Fine Arts Degree in Theatre Arts Concentration in Design and Technical Theatre

The materials as outlined under Admission to the Degree Curriculum should be mailed or delivered to:

School of Theatre, Television, and Film  
(Attention: Design Program)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7601

### Master of Fine Arts Degree in Theatre Arts Concentration in Musical Theatre

This program admits new students every other year only.

The materials as outlined under Admission to the Degree Curriculum should be mailed or delivered to:

School of Theatre, Television, and Film  
(Attention: Musical Theatre Program)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7601

## Master of Arts Degree in Theatre Arts

### Admission to the Degree Curriculum

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 for students in Plan A or 790 for students in Plan B and successful completion of the comprehensive examination are required courses for all Master of Arts candidates.

## Master of Fine Arts Degree in Theatre Arts

### Admission to the Degree Curriculum

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. 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 and a 3.0 undergraduate average in the major.
2. Complete undergraduate requirements commensurate with the proposed concentration in the M.F.A. program.
3. 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 or visit our Web site at <http://tlf.sdsu.edu>.

### 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 video or DVD, to include two contrasting vocal selections, two contrasting monologues, and a dance/movement piece.
3. Three references attesting to the candidate's academic qualifications and level of competence in the areas of acting, singing, and dancing.

## Theatre Arts

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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 or visit our Web site at <http://tff.sdsu.edu>.

### 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 48 units as follows: Theatre 555B (maximum credit 8 units), 600A, 600B, 620A, 620B, 622A, 622B, 623, 627 (maximum credit 16 units), 630 (maximum credit 4 units), 650, and 659. The student must also complete 9 units of Theatre 746 (internship), 795 (practicum), and (Plan A) 799A (thesis/project report) or (Plan B) 790 (preparation for comprehensive examination).

Three additional units are to be selected with the approval of the student's graduate adviser from courses acceptable for graduate credit.

Candidates will either: (Plan A) successfully prepare a written thesis project report or (Plan B) successfully complete a comprehensive examination.

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# Women's Studies

In the College of Arts and Letters

**OFFICE: Arts and Letters 346**

**TELEPHONE: 619-594-6524**

**<http://www-rohan.sdsu.edu/dept/wsweb/masters.html>**

## Faculty

Bonnie K. Scott, Ph.D., Professor of Women's Studies,  
Chair of Department

Susan E. Cayleff, Ph.D., Professor of Women's Studies  
(Graduate Adviser)

Esther D. Rothblum, Ph.D., Professor of Women's Studies

Bonnie S. Zimmerman, Ph.D., Professor of Women's Studies and  
Associate Vice President for Faculty Affairs

Elizabeth A. Colwill, Ph.D., Associate Professor of Women's Studies

Anne Donadey, Ph.D., Associate Professor of Women's Studies

Huma Ahmed-Ghosh, Ph.D., Associate Professor of Women's Studies

Doreen J. Mattingly, Ph.D., Associate Professor of Women's Studies

Irene Lara, Ph.D., Assistant Professor of Women's Studies

Kimala J. Price, 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.

Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Women's Studies.

### Graduate Admissions

The following materials should be submitted as a complete package directly to:

Graduate Admissions  
Enrollment Services  
San Diego State University  
San Diego, CA 92182-7416

- (1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;

Note:

- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

- (2) GRE scores (<http://www.ets.org>, SDSU institution code 4682). No graduate application will be considered complete without received GRE scores;

- (3) TOEFL score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Department of Women's Studies

The following materials should be mailed or delivered to:

Department of Women's Studies  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-8138

- (1) Two letters of reference from individuals with direct knowledge of the applicant's scholarly ability;

- (2) 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.

## Advancement to Candidacy

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

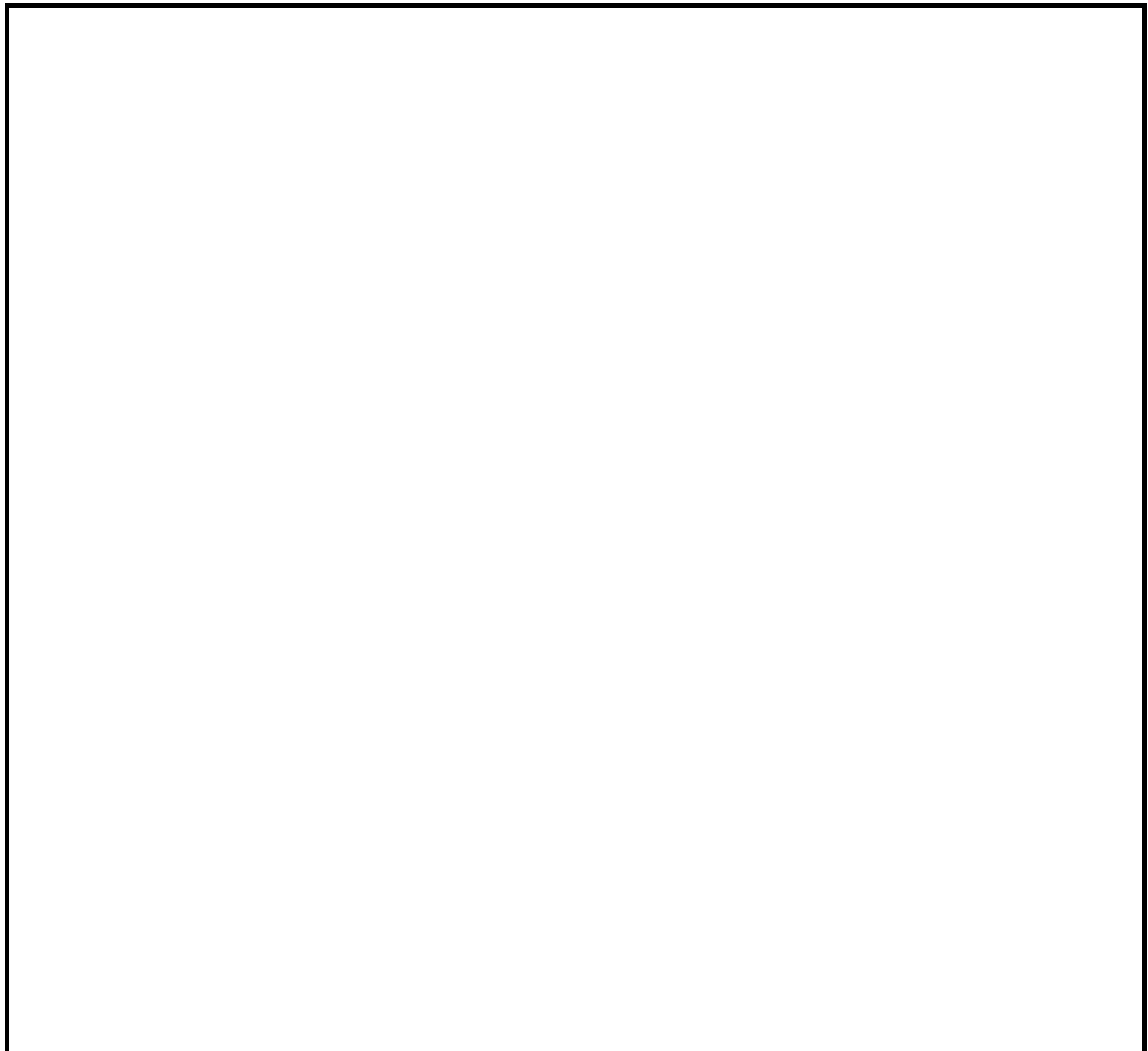
**Specific Requirements for the Master of Arts Degree**

**(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, 608, 609, 611, 696, 701; 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 graduate 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 or project. With the approval of the graduate adviser, a student may select Plan B, comprehensive examination. When Plan B is chosen, three additional graduate units in women's studies shall be selected in lieu of 799A. 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.

Students may choose an international specialization consisting of nine units of graduate courses selected from Women's Studies 512, 530, 560, 580, 581, 605, 607, 609, 611. Other graduate level courses may be included in the international specialization with the approval of the graduate adviser.







## Accountancy (ACCTG)

In the College of Business Administration

### UPPER DIVISION COURSES

#### ACCTG 501. Advanced Financial Accounting (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.

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)

Prerequisites: Minimum grade of C in Accountancy 322; credit or concurrent registration in Accountancy 421. **Proof of completion of prerequisites 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)

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 505. Fraud Examination (3)

Prerequisites: Accountancy 421 or 626.

Fraud examination to include techniques and technologies for interviewing, document examination, public records research, and financial statement analysis. Skills and tools for auditors, consultants, tax professionals, managers.

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

Prerequisites: 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: Business major approved by the College of Business Administration and consent of instructor.

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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### GRADUATE COURSES

#### ACCTG 620. Financial Reporting and Analysis II (3)

Prerequisites: 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)

Prerequisites: 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)

Prerequisites: Accountancy 322, 503, or 624.

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)

Prerequisites: 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)

Prerequisites: Credit or concurrent registration in Accountancy 650.

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

#### ACCTG 655. Tax Planning for Individuals (3)

Prerequisites: 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)

Prerequisites: 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)

Prerequisites: 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)

Prerequisites: Accountancy 620.

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)

Prerequisites: 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)

Prerequisites: 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.

#### ACCTG 670. Seminar in Auditing (3)

Prerequisites: Accountancy 421 or 626.

Selected conceptual issues in auditing.

#### ACCTG 671. Seminar in Compilation and Review Services (3)

Prerequisites: Accountancy 421 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)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

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

Prerequisites: Advancement to candidacy.

Preparation for the comprehensive examination for the M.S. program.

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

Prerequisites: 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**

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

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

**ARP 607. Applications of Rehabilitation Technology (3)  
(Selected sections offered as distance education)**

Prerequisites: 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)  
(Selected sections offered as distance education)**

Concepts and techniques of leadership, analysis of the factors and practice of individual and group leadership as applied to educational and related environments.

**ARP 611. Program Development and Evaluation in Postsecondary Education (3)  
(Selected sections offered as distance education)**

Prerequisites: Consent of instructor.

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 615. Seminar in Multicultural Dimensions in Rehabilitation Counseling (3)  
(Selected sections offered as distance education)**

Prerequisites: Admission to graduate program in rehabilitation counseling.

Issues, insights, and techniques for improving effectiveness in working with culturally diverse individuals with disabilities and their families. Focuses on insuring culturally appropriate and relevant rehabilitation services including full community integration. (Formerly numbered Counseling and School Psychology 615 entitled Seminar in Multicultural Dimensions in Counseling.)

**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)**

Prerequisites: Consent of instructor.

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: Consent of instructor.

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 in Critical Leadership Issues in Student Affairs (3)**

Prerequisites: Consent of instructor.

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)  
(Selected sections offered as distance education)**

Prerequisites: Consent of instructor.

Teaching process in postsecondary education addressing syllabus construction, lesson planning, using technology in teaching, and infusing multicultural education into courses. Assessing student learning through authentic evaluation techniques.

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## **Administration, Rehabilitation and Postsecondary Education (ARP)**

*In the College of Education*

### **UPPER DIVISION COURSES**

**ARP 565. Psychological Foundations of Adult and Vocational Education (3)**

Prerequisites: 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)**

Prerequisites: 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 topics in administration, rehabilitation and postsecondary education. May be repeated with new content. 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### **GRADUATE COURSES**

**ARP 605. Postsecondary Education (3)  
(Selected sections offered as distance education)**

Philosophy, history, aims, scope, functions, outcomes, principles, and challenges of postsecondary education. Emphasizes teaching, student affairs, and administrative leadership in postsecondary education.

**ARP 645A-645B. Assessment in Rehabilitation (3-3)**  
**(Selected sections offered as distance education)**

Prerequisites: 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.

**ARP 648. Group Dynamics in Rehabilitation (3)**  
**(Selected sections offered as distance education)**

Prerequisites: 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)**  
**(Selected sections offered as distance education)**

Counseling theories, approaches to and techniques for counseling, and research concerning counseling effectiveness.

**ARP 680. Seminar in Administration, Rehabilitation and Postsecondary Education (2-6)**  
**(Selected sections offered as distance education)**

Prerequisites: 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)**  
**(Selected sections offered as distance education)**

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)**  
**(Selected sections offered as distance education)**

Prerequisites: 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)**  
**(Selected sections offered as distance education)**

Prerequisites: Admission to the graduate program in rehabilitation counseling.

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)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**ARP 710A-710B. Seminar in Rehabilitation (3-3)**  
**(Selected sections offered as distance education)**

Prerequisites: 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 and/or administration. See *Class Schedule* for specific content.

**ARP 720. Human Resource Development in Postsecondary Education (3)**  
**(Selected sections offered as distance education)**

Prerequisites: 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 education programs.

**ARP 727. Emerging Issues in Postsecondary Educational Leadership (3)**  
**(Selected sections offered as distance education)**

Prerequisites: Consent of instructor.

Identification and analysis of emerging local, national, and international issues impacting education.

**ARP 730. Seminar in Adult Learning (3)**  
**(Selected sections offered as distance education)**

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)**  
**(Selected sections offered as distance education)**

Prerequisites: 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**  
**(Selected sections offered as distance education)**

Prerequisites: 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**  
**(Selected sections offered as distance education)**

Prerequisites: 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**  
**(Selected sections offered as distance education)**

Prerequisites: 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 or enrollment in the Rehabilitation Administration Certificate.

**ARP 746. Seminar in Rehabilitation with Consumers Who Are Deaf and Hard of Hearing (3)**

Prerequisites: 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)**  
**(Selected sections offered as distance education)**

Prerequisites: 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.

**ARP 755. Governance and Policy Development in Postsecondary Learning Organizations (3)**  
(Selected sections offered as distance education)

Prerequisites: 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**

Prerequisites: Consent of instructor.

Internship for prospective educational leaders. Released time may be required. May be repeated. Maximum credit six units applicable to a master's degree.

**ARP 798. Special Study (1-6) Cr/NC/RP**

Prerequisites: 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.

**ARP 801. Seminar in Community College History and Development (3)**

Prerequisites: Admission to educational leadership doctoral program.

Mission, functions, organization, student characteristics, and problems with community college operations. Future trends in community college operations and need for new leadership and research opportunities.

**ARP 810. Seminar in Community College Law and Finance (3)**

Prerequisites: Administration, Rehabilitation and Postsecondary Education 801.

Legal framework for operating community colleges in California. Community college finance system including state and local contributions to funding.

**ARP 811. Seminar in External Partnerships for Community Colleges (3)**

Prerequisites: Administration, Rehabilitation and Postsecondary Education 801.

Working with statewide and community groups, organizations, and boards of trustees to establish partnerships that nurture diversity, promote student success, and sustain community college mission. Economic development mission of community colleges in the local community.

**ARP 812. Seminar in Budget and Resource Management in Community Colleges (3)**

Prerequisites: Administration, Rehabilitation and Postsecondary Education 801.

Equitably and ethically managing, sustaining, and acquiring human, fiscal, and information resources, as well as assets to fulfill mission of the community college and postsecondary education institutions. Financial strategies and human resource systems and conflict resolution.

**ARP 813. Strategic Planning in Community Colleges (3)**

Prerequisites: Administration, Rehabilitation and Postsecondary Education 801.

Knowledge-based strategic planning to maximize student success in community colleges and postsecondary educational institutions. Board-administrator relationship development and use of data-driven evidence for decision-making.

## Aerospace Engineering (AE)

*In the Department of Aerospace Engineering and Engineering Mechanics  
In the College of Engineering*

### UPPER DIVISION COURSES

**A E 520. Intermediate Aerospace Flight Mechanics (3)**

Prerequisites: Aerospace Engineering 320.

Rigid-body dynamics with applications in spacecraft attitude dynamics.

**A E 530. Rocket and Space Propulsion (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Consent of instructor.

Modern developments in aerospace engineering. May be repeated with new content. 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### GRADUATE COURSES

**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 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 (2-3)**

Intensive study in specific areas of aerospace engineering. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**A E 797. Research (1-3) Cr/NC/RP**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

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## **Anthropology (ANTH)**

*In the College of Arts and Letters*

### **UPPER DIVISION COURSES**

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

Two lectures and three hours of laboratory.

Prerequisites: 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.

Prerequisites: 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 506. Osteology and Paleopathology (3)**

Two lectures and three hours of laboratory.

Prerequisites: Anthropology 505.

Conditions that result in bony pathological responses are often linked to cultural and environmental variables including habitual behaviors and diet. Will consider how these variables can be investigated through paleopathology and paleoepidemiology.

#### **ANTH 507. Forensic Anthropology (3)**

Two lectures and three hours of laboratory.

Prerequisites: Anthropology 505.

Anthropology within medicolegal context. Methodology used in forensic anthropology.

#### **ANTH 508. Medical Anthropology (3)**

Prerequisites: Anthropology 101 or 102.

Socio-cultural 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)**

Prerequisites: 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)**

Prerequisites: 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 523. Anthropology of Politics and Power (3)**

Prerequisites: Anthropology 102.

How anthropology investigates power as an underlying and primary force in human relations through cross-cultural study of political institutions, effects, and relationships of power in various societies.

#### **ANTH 524. Cultural Dynamics of Religious Discourse (3)**

Prerequisite: Anthropology 102.

Interplay of local and global religious discourses. Creativity of indigenous religious practices. Dynamics of missionization, including hybridization with local religious practices. Fundamentalist discourses as oppositional mediations between local and global identity formations.

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

Prerequisites: 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. Methods in Applied Anthropology (3)**

Prerequisites: Anthropology 102.

Anthropological concepts and methodologies to solve human problems in both western and non-western societies through intervention, community development, impact assessment, and cultural communication.

#### **ANTH 533. Race, Ethnicity, and Identity (3)**

Prerequisites: Anthropology 102.

Theories and practices of race, ethnicity, and identity from a cross-cultural and anthropological perspective. History of race in US and other regions, focusing on how identities are constructed around concepts of difference.

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

Prerequisites: 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 536. Gender and Human Sexuality (3)**

Prerequisites: Anthropology 102.

Constructions of gender and sexuality from anthropological perspective. Social constructions of body, norms, deviance, and medicalization of sexuality.

#### **ANTH 537. Anthropology of Childhood (3)**

Prerequisite: Anthropology 102.

Childhood in diverse cultural settings; evolutionary, biosocial, and health-related aspects of childhood; social and cultural uses of idea of childhood; enculturation and children's relationship to material culture.

#### **ANTH 540. Contemporary Cultures of Mesoamerica (3)**

Prerequisites: Anthropology 102.

Utilizing ethnographic data explore growth and development of contemporary cultures of Mesoamerica from precontact to today. Countries may include Mexico, Belize, Costa Rica, El Salvador, Guatemala, Nicaragua, and Panama.

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

Six hours of activity.

Prerequisites: 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.

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Consent of instructor.

Advanced topics in anthropology. May be repeated with new content. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser

**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)**

Prerequisites: 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)**

Prerequisites: Twelve upper division units in anthropology.

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

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

Prerequisites: 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)**

Prerequisites: 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 605. Seminar in Applied Anthropology (3)**

Prerequisites: Nonconditional graduate standing in anthropology.

Use of anthropological theory and methods in solving contemporary social problems. Contemporary ethnographic examples from differing regions of the world reviewed to understand complexity and locally specific variables that must be addressed in proposing interventions and solutions.

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

Prerequisites: 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**

Prerequisites: Advancement to candidacy.

Independent investigation in the general field of the thesis.

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

Prerequisites: 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**

Prerequisites: 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.

**Art (ART)**

*In the School of Art, Design, and Art History*

*In the College of Professional Studies and Fine Arts*

**UPPER DIVISION COURSES****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)**

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 III (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. Painting III (3)**

Six hours.

Prerequisites: Six units of Art 404.

Approaches to contemporary concepts in painting. 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 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. Printmaking III-Lithography (3)**

Six hours.

Prerequisites: 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. Sculpture III (3)**

Six hours.

Prerequisites: 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 II (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. Furniture Design and Woodworking III (3)**

Six hours.

Prerequisites: 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. Ceramics III (3)**

Six hours.

Prerequisites: 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.

Prerequisites: 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. Jewelry and Metals IIIA-Jewelry (3)**

Six hours.

Prerequisites: 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. Jewelry and Metals IIIB-Metalsmithing (3)**

Six hours.

Prerequisites: 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 535. Fiber Construction II (3)**

Six hours.

Prerequisites: 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. Fiber Surface Design II (3)**

Six hours.

Prerequisites: Art 436.

Application of design for the textile surface, appropriate for both the individual designer and commercial reproduction. Maximum credit six units.

**ART 540. Digital Photography II (3)**

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. Visual Identity and Branding Systems (3)**

Six hours.

Prerequisites: Art 339A and grade of C (2.0) or better in two of the following: Art 441, 442, 450, 454. Computer proficiency required with working knowledge of vector graphics, page layout, digital image editing, motion graphics, and web design software consistent with current industry standards. **Proof of completion of prerequisites required:** Copy of transcript.

Strategy, planning, and problem solving related to visual communication systems with emphasis on social and cultural context.

**ART 542. Typography IV (3)**

Six hours.

Prerequisites: Art 339A and grade of C (2.0) or better in Art 442. Computer proficiency required with working knowledge of vector graphics, page layout, digital image editing, motion graphics, and web design software consistent with current industry standards. **Proof of completion of prerequisite required:** Copy of transcript.

Individual creative and scholarly research in typography, conceptual and contextual exploration, typographic experimentation based on theory, strategy, and problem solving. Maximum credit six units.

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

Six hours.

Prerequisites: Grade of C (2.0) or better in Art 443. **Proof of completion of prerequisite required:** Copy of transcript.

Strategy and problem solving of professional illustration as related to graphic design; individual conceptual and contextual exploration. Maximum credit six units.

**ART 544. Emerging Technologies in Multimedia (3)**

Six hours.

Prerequisites: Grade of C (2.0) or better in Art 348 or 440 or 448 or 540.

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)**

Six hours.

Prerequisites: Grade of C (2.0) or better in two of the following: Art 441, 442, 450, 454, 541, and portfolio review. Computer proficiency required with working knowledge of vector graphics, page layout, digital image editing, motion graphics, and web design software consistent with current industry standards. **Proof of completion of prerequisites required:** Copy of transcript.

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. Copy of transcript required.

**ART 546. The Art of the Book III (3)**

Prerequisite: Art 446.

Design and creation of limited edition artist books made with mixed media and hand printing techniques such as letterpress, intaglio, woodcut, lithography, and photo. Maximum credit six units. Combined credit of 15 units for Art 346, 446, 546.



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

Prerequisites: Art 247 or 347.

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

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

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)**

Six hours.

Prerequisites: 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. Nineteenth Century European Art (3)**

Prerequisites: Art 259.

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

**ART 558. Twentieth Century European Art to 1945 (3)**

Prerequisites: 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)**

Prerequisites: Art 259. Recommended: Art 558.

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

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

Prerequisites: 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)**

Prerequisites: Art 259.

Art and architecture of Mesoamerica from Olmecs to Aztecs. Role of art as transmitter of cultural information and world view. Continuities and ideologies that characterize Mesoamerican civilizations.

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

Prerequisites: Art 259.

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

**ART 563. Modern Mexican Art (3)**

Prerequisites: Art 258 and 259.

Mexican art from 1900 to present. Emphasis on images created after Mexican Revolution (1910-1920) in murals, painting, architecture, prints, photography, film, conceptual art. Construction of national identity, debate between national/international currents in art and role of public art. Field trip.

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

Prerequisites: Art 258 or 259 or 263.

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

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

Prerequisites: 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)**

Prerequisites: 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 568. Art of Crete, Mycenae, Greece, and Rome (3)**

Prerequisites: 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)**

Prerequisites: Art 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)**

Prerequisites: Art 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)**

Prerequisites: 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)**

Prerequisites: 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 574. Northern Renaissance Art (3)**

Prerequisite: Art 259.

Painting, sculpture, architecture, printmaking, and tapestries in Northern Europe, 1350-1575. Historical context of art and artists pertaining to gender, popular culture, courtly traditions, and changing role of artists in the Reformation.

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

Prerequisites: 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)**

Prerequisites: 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)**

Six hours.

Prerequisites: Fifteen units of art.

Fundamental art elements and principles applied to the theories and techniques of gallery exhibition design.

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

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES**

**ART 600. Drawing (3)**

Six hours.

Prerequisites: 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.

Prerequisites: 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.

Prerequisites: 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.

Prerequisites: 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.

Prerequisites: 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.

Prerequisites: 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. Jewelry and Metalwork (3)**

Six Hours.

Prerequisites: 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. Textile Design (3)**

Six Hours.

Prerequisites: Art 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.

Prerequisites: 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 642. Typography (3)**

Six hours.

Prerequisites: Art 542.

Advanced creative and scholarly research in typography for visual expression and communication; typographic experimentation based on theory, strategy, and problem solving. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

**ART 644. Multimedia (3)**

Six hours.

Prerequisites: Art 544.

Creative applications of interactive and time-based visual expression using contemporary multimedia formats. 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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 Principles of Design in Space Arts (3)**

Prerequisites: Art 558 or 559.

Activity of creative expression and aesthetic appreciation in area of visual experience. 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)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**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. 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.

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

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

Six hours.

Prerequisites: 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)**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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 (ASIAN)

*In the Department of Asia Pacific Studies*

*In the College of Arts and Letters*

### UPPER DIVISION COURSES

**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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**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 in Revolution (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 581. Major Theme (3)\*

REL S 583. Major Tradition (3)\*

\* Acceptable when of relevant content.

### GRADUATE 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**

Prerequisites: 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**

Prerequisites: 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 History of Economic Thought (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.

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## Astronomy (ASTR)

*In the College of Sciences*

### UPPER DIVISION COURSE

#### ASTR 596. Advanced Topics in Astronomy (2-3)

Prerequisites: Consent of instructor.

Selected topics in 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### GRADUATE COURSES

#### ASTR 610. Binary Stars (3)

Prerequisites: 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)

Prerequisites: 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)

Prerequisites: 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)

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 790A. Research Paper (3) Cr/NC/RP

Prerequisites: An officially appointed research project committee and advancement to candidacy. Completion of the 15 unit core course curriculum.

Preparation of a scientific paper, based on original astronomical research, suitable for publication in a refereed astronomical journal.

#### ASTR 790B. Research Paper Extension (0) Cr/NC

Prerequisite: Prior registration in Astronomy 790A with an assigned grade symbol of RP.

Registration required in any semester or term following assignment of RP in Course 790A 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 research paper is granted final approval.

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

Prerequisites: 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

Prerequisites: 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

Prerequisites: 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 (AUD)

*In the School of Speech, Language,  
and Hearing Sciences*

*In the College of Health and Human Services*

### GRADUATE COURSES

#### AUD 696. Selected Topics in Audiology (1-3)

Prerequisites: Graduate standing.

Intensive study in specific areas of audiology. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

#### AUD 700. Hearing Science (3)

Prerequisites: 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.

**AUD 705. Diagnostic Audiology I (3)**

Two lectures and two hours of activity.

Prerequisites: Admission to doctoral program.

Theoretical bases and technical experience necessary to perform basic audiological assessment, including otoscopy, pure-tone, masking, speech, and immittance measures, testing and patient counseling. Hands-on experiences with different tests and equipment.

**AUD 710. Hearing Amplification I (3)**

Prerequisites: Admission to doctoral program.

Hearing aid components and signal processing, electroacoustic analysis, prescriptive techniques, verification procedures, hearing aid orientation, follow-up and troubleshooting.

**AUD 711. Hearing Amplification II (3)**

Two lectures and two hours of activity.

Prerequisites: Audiology 710.

Advanced techniques in hearing aid analysis including in-situ and insertion real-ear measures for verification and validation, electro-acoustic analysis, ALD analysis, special techniques for pediatric hearing aid fitting, hearing aid fine tuning/troubleshooting and case studies.

**AUD 712. Research and Evidence-Based Practice in Audiology (3)**

Prerequisite: Admission to the doctoral program.

Research methods and scientific writing in audiology/hearing science; critical evaluation of research; evidence-based practice in audiology; research proposal development.

**AUD 715. Diagnostic Audiology II (3)**

Two lectures and two hours of activity.

Prerequisites: Audiology 705.

Advanced procedures, including video-otoscopy, cerumen management, multiple component tympanometry, tests for 8th nerve, non-organic, and central involvement, and calibration. Principles and procedures for otoacoustic emission measurements (OAEs). Pathologies as they relate to audiological measures.

**AUD 720. Auditory Evoked Potentials I (4)**

Prerequisites: Audiology 700 and 705.

Theoretical and clinical aspects of auditory evoked potentials, specifically otoacoustic emissions and their measurement, electrocochleography, and auditory brainstem responses.

**AUD 721. Clinical Case Studies and Staffings I (1)**

Prerequisites: 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.

**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 (1-2) Cr/NC**

One unit represents three hours per week.

Prerequisites: Open to third year doctoral students and consent of instructor.

Diagnostics and hearing aid evaluations/ittings in the on-campus audiology clinic. May be repeated. Maximum credit three units.

**AUD 805. Seminar in Vestibular Physiology, Assessment, and Rehabilitation (3)**

Prerequisites: Open to second 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.

**AUD 810. Seminar in Amplification Research and Technology (3)**

Prerequisites: Audiology 711.

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.

**AUD 815. Communication Disorders Across Lifespan and Cultures (2)**

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 Counseling (3)**

Prerequisites: 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.

**AUD 821. Clinical Case Studies and Staffings II (1)**

Prerequisites: 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.

**AUD 830. Seminar in Contemporary Topics in Audiology and Hearing Science (1)**

Prerequisites: 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)**

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.

**AUD 835. Psychoacoustics (3)**

Prerequisites: 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.

**AUD 840. Auditory Evoked Potentials II (2)**

Prerequisites: Audiology 720.

Advanced techniques in measurement of otoacoustic emissions and later auditory evoked potentials. Otoacoustic emission level dependence, group delay, and suppression; middle latency and steady-state responses, cortical auditory evoked potentials (N1-P2), and auditory event-related potentials (MMN, P3).

### AUD 845. Hearing Conservation (2)

Prerequisites: Audiology 700 and 705.

Hearing conservation programs in various settings. Current research on occupational noise exposure and hearing loss and workers' compensation coverage of hearing loss.

### AUD 871. Externship in Audiology (10)

Prerequisites: Advancement to candidacy.

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. Maximum credit 30 units.

### AUD 891. On-Line Integrative Clinical Seminar (2) Cr/NC (Offered only as a distance education course)

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/RP

Prerequisites: Consent of adviser.

Research in audiology or hearing science. Maximum credit three units applicable to the audiology degree.

### AUD 899. Doctoral Project (1-3) Cr/NC/RP

Prerequisites: Audiology 712 and advancement to candidacy.

Individual investigation and preparation of the doctoral project for the audiology degree.

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## Bioinformatics and Medical Informatics (BIOMI)

*In the College of Sciences*

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

Prerequisites: Consent of instructor.

Research in one of the fields of bioinformatics and medical informatics. Maximum credit six units applicable to a master's degree.

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

Prerequisites: Consent of staff; to be arranged with graduate coordinator.

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

### BIOMI 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.

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## Biology (BIOL)

*In the College of Sciences*

### UPPER DIVISION COURSES

**Writing Requirement: Completion of the Graduation Writing Assessment Requirement or the eligibility to enroll in an upper division writing course is a prerequisite for all upper division biology courses numbered 450 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.

Prerequisites: 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 510. Molecular Evolution (3)

Prerequisites: Biology 352 and 366 or graduate standing.

Molecular evolution including concepts of homology and convergence, the nearly neutral theory of evolution, evolution of new protein function, detecting selection, multi-gene family evolution and evolutionary genomics.

### BIOL 511. Evolution of Development (3)

Prerequisites: Biology 352 and 366.

Dynamic relationship between regulatory functions that control development and the evolutionary process, and vice versa, illustrated with evidence derived from developmental, phylogenetic, paleontological, computational, and ecological research. Emphasis on genomic regulatory networks of transcriptional regulatory elements and cell-signaling pathways.

### 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 including 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 201A, 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.

Prerequisites: Biology 201A, 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.

Prerequisites: 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 523. Herpetology (4)

Two lectures and six hours of laboratory.

Prerequisites: Biology 201A, 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.

Prerequisites: 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.

Prerequisites: 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.

Prerequisites: 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 527. Animal Behavior (4)**

Three lectures and three hours of laboratory.

Prerequisites: Biology 215; Biology 201B or Psychology 211 and 260 for psychology majors.

Biological bases of animal behavior with emphasis on the ethological approach, including the evolution and adaptive significance of behavior.

**BIOL 528. Microbial Ecology (3)**

Two lectures and three hours of laboratory.

Prerequisites: Biology 201A and 201B. Recommended: Biology 350 and 354.

Roles of microorganisms in soil, aquatic and marine ecosystems, microbial adaptations to the environment, and interactions within microbial communities and between microbes and multicellular organisms. Laboratory techniques to isolate and study microbes.

**BIOL 530. Plant Systematics (4)**

Two lectures and six hours of laboratory, field trips.

Prerequisites: Biology 201A, 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.

Prerequisites: Biology 201A and 201B.

Fundamentals of plant taxonomy with emphasis on identification of plants native and naturalized to California. Plant collecting techniques. Field trips are required.

**BIOL 535. Plant Ecology (4)**

Three lectures and three hours of laboratory.

Prerequisites: Biology 201A and 201B. Strongly recommended: Biology 354.

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 537. Population Modeling for Conservation (3)**

Two lectures and three hours of laboratory.

Prerequisites: Biology 354.

Applied population modeling in context of conservation. How mathematical models can be used to simulate population dynamics of single and multiple species and rank conservation management options.

**BIOL 538. Environmental Policy and Regulations (3)**

Prerequisites: Biology 354.

History of biological conservation and environmental laws; regulations governing biological resources; role of biologists; environmental impact analysis, operation of regulatory and resource agencies; biologists as expert witnesses; wetland protection and mitigation, state heritage programs, role of nongovernmental agencies.

**BIOL 540. Conservation Ecology (3)**

Two lectures and three hours of laboratory.

Prerequisites: 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.

Prerequisites: Biology 354.

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 546. Systematics and Biodiversity (3)**

Two lectures and two hours of activity.

Prerequisites: Biology 201A, 201B, 352.

History, philosophy, and practical aspects of systematic biology, emphasizing pervasive role of phylogenetic data in evolutionary biology and other fields, phylogenetic structure of all lifeforms, and geographic patterns of diversity, endemism and imperilment.

**BIOL 549. Microbial Genetics and Physiology (3)**

Prerequisites: 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 549 or 567.

Theory and practice of recombinant DNA techniques.

**BIOL 554. Molecular Virology (3)**

Prerequisites: Biology 366 and Chemistry 365.

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.

Prerequisites: 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.

Prerequisites: 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 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 567. Advanced Biochemistry, Cellular, and Molecular Biology (4)**

Prerequisites: Biology 366 and Chemistry 365.

Advanced concepts of cellular biology, molecular biology, and biochemistry. (Formerly numbered Biology 467.)

**BIOL 567L. Biochemistry, Cellular, and Molecular Biology Laboratory II (2)**

Six hours of laboratory.

Prerequisites: Biology 366, 366L, credit or concurrent registration in Biology 567. Recommended: Biology 350.

Intermediate laboratory approaches to biochemistry, cellular biology, and molecular biology at a level appropriate for both advanced undergraduate and graduate students. (Formerly numbered Chemistry 467L.)

**BIOL 568. Bioinformatics (3)**

Two lectures and three hours of laboratory.

Prerequisites: Biology 366.

Bioinformatics analysis methods and programming skills. Practical bioinformatic software for sequence analysis, bioinformatic algorithms and programming fundamentals.

### **BIOL 570. Neurobiology (3)**

Prerequisites: 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)**

Prerequisites: Biology 366 or 590.

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

### **BIOL 576. Developmental Biology (3)**

Prerequisites: Biology 366. Strongly recommended: Biology 567.

Fundamental processes of development from fertilized egg to organism. Emphasis on cellular and molecular mechanisms common to development of metazoan organisms.

### **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 567 and 567L.

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 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) Cr/NC**

Prerequisites: Biology 366 and credit or concurrent registration in Biology 567.

Research methods in biotechnology community. Speakers from local biotechnology companies and research institutes discuss power and limitations of current research methods being applied to develop new therapeutics. Evaluation of approaches, results, and utility of these technologies. Not applicable to biology or microbiology majors.

### **BIOL 596. Special Topics in Biology (1-4)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### **BIOL 597A. Univariate Statistical Methods in Biology (3)**

Two lectures and three hours of laboratory.

Prerequisites: Biology 350 or 352 or 354 or 366.

Application of univariate statistical techniques in biological sciences.

## **GRADUATE COURSES**

### **BIOL 600. Seminar (2-3)**

Prerequisites: 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 604. Seminar in Aquatic Ecology (2)**

Prerequisites: 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 606. Biological Data (3)**

Two lectures and three hours of laboratory.

Prerequisites: Biology 597A or equivalent graduate course in biostatistics.

Concepts and applications of advanced statistical techniques in the biological sciences to include multivariate statistics, analysis of discrete data, spatial statistics, time series analysis, and Monte Carlo methods (e.g. bootstrapping and randomization tests).

### **BIOL 624. Population Genetics (3)**

Two lectures and two hours of activity.

Prerequisites: Biology 352.

Theoretical and applied population genetics to include genetic diversity in natural populations, random drift, mutation, gene flow, natural selection, nucleotide variation, and quantitative genetics. Emphasis on data analysis and interpretation.

### **BIOL 630. Signal Transduction (3)**

Prerequisites: Biology 366 and Chemistry 365.

Intracellular transduction pathways that regulate growth and death in neuronal, endocrine, muscle, and immune cells.

### **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 677. Seminar in Marine Conservation Biology (3)**

Prerequisite: Graduate standing.

Threats to marine biodiversity and marine populations.

### **BIOL 688. Seminar in Terrestrial Ecology (2)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Consent of instructor.

Intensive study in specific areas of biology. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### **BIOL 735. Seminar in Biogeography (2)**

Prerequisites: 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.

Prerequisites: 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)**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: Admission to the doctoral program.

Independent investigation in the general field of the dissertation.

**BIOL 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 student plans to graduate.

**BQS 696. Advanced Topics in Biomedical Quality Systems (1-4)  
(Offered only as a distance education course)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**BQS 730. Good Manufacturing, Laboratory, and Clinical Practices (3)  
(Offered only as a distance education course)**

Prerequisites: 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)  
(Offered only as a distance education course)**

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)  
(Offered only as a distance education course)**

Prerequisites: 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. Document Control Quality System (3)  
(Offered only as a distance education course)**

Prerequisites: Biomedical Quality Systems 601.

Regulatory requirements for developing and manufacturing documentation, supporting the quality assurance function.

**BQS 746. Quality Control Laboratory Validation (3)  
(Offered only as a distance education course)**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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/RP**

Prerequisites: 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.

**Biomedical Quality Systems (BQS)**

*In the College of Sciences*

**GRADUATE COURSES**

**BQS 601. Biomedical Quality Systems (3)  
(Offered only as a distance education course)**

Global view of biomedical industry and safe medical devices act from quality perspective to provide foundation in field of biomedical quality systems.

**BQS 603. Foundational Quality Systems (3)  
(Offered only as a distance education course)**

Prerequisites: Biomedical Quality Systems 601.

Roles and responsibilities of a typical quality assurance (QA) department in biopharmaceutical, medical device, and pharmaceutical industries. Practical skills, approaches, and solutions to multifaceted auditing, change control, compliance, documentation, laboratory, material, and production control issues.

**BQS 620. Quality Control Methods Development (3)  
(Offered only as a distance education course)**

Prerequisites: Biomedical Quality Systems 601.

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)  
(Offered only as a distance education course)**

Prerequisites: Biomedical Quality Systems 601.

Audit topics explored from viewpoint of industry professional, current industry, and regulatory information.

**Business Administration (B A)**  
*In the College of Business Administration*

**GRADUATE COURSES**

**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 603. Executive Financial Accounting (2)**

Prerequisites: Admission to M.B.A. for Executives program.

Accounting procedures and judgments underlying corporate financial statements; ability to read and analyze these statements; make inferences about financial stability, likelihood of success, and other important attributes of various business entities.

**B A 604. Executive Managerial Accounting (2)**

Prerequisites: Admission to M.B.A. for Executives program.

Accounting information for internal decision making purposes to include cost measurement, capacity management, activity based costing, activity based management, production costing, quality costing, pricing, CVP analysis, budgeting, performance evaluation, transfer pricing, and compensation.

**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 650. Financial Reporting and Analysis I (3)**

Prerequisites: 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 (3)**

Prerequisites: Classified graduate standing.

Study of individuals and groups within an organizational context. Topics include leadership, individual differences, organizational design, group processes and characteristics, organizational processes and practices; and influence of these on individual, group, and organizational effectiveness.

**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 (3)**

Prerequisites: Classified graduate standing.

Microeconomic theory applied to business decision making; optimal resource allocation, market structure and pricing from a business viewpoint. Economics of information.

**B A 655. Marketing (3)**

Prerequisites: 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 (3)**

Prerequisites: 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 (3)**

Prerequisites: Classified graduate standing.

Strategic and tactic managerial skills to establish, execute, and reengineer operational processes that organizations use to provide services and products. Applications of scientific methods to integrate business decisions along value chains.

**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 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. Executive Entrepreneurship (3)**

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 707. Executive Seminar in Negotiations (2)**

Prerequisites: Admission to M.B.A. for Executives program.

Negotiations principles in managerial contexts. Concepts, skills, and simulations of negotiation processes.

**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. Executive Leadership (3)**

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 (1-5)**

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 five units applicable to a master's degree.

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

Prerequisites: 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 790. Directed Readings in Business Administration (3) Cr/NC**

Preparation for the comprehensive examination for students in the M.B.A. for Executives program (Plan B).

**B A 795. Integrative Business Analysis (3)**

Prerequisites: 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/FP**

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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

## Chemistry (CHEM)

*In the Department of Chemistry and Biochemistry  
In the College of Sciences*

### UPPER DIVISION COURSES

**CHEM 510. Advanced Physical Chemistry (3)**

Prerequisites: Chemistry 410B.

Problems in chemical thermodynamics, statistical mechanics, chemical kinetics, quantum chemistry and molecular structure and spectroscopy, with applications.

**CHEM 520A-520B. Inorganic Chemistry (3-3)**

Prerequisite: 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 531. Synthetic Organic Chemistry (3)**

Prerequisites: 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; 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)**

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)**

Prerequisites: 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 560. General Biochemistry (3)**

Prerequisites: Chemistry 231, credit or concurrent registration in Chemistry 410A and 431.

The structure, function, metabolism, and thermodynamic relationships of chemical entities in living systems. Not open to students with credit in Chemistry 365.

**CHEM 562. Intermediary Metabolism (2)**

Prerequisites: Chemistry 560 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.

**CHEM 563. Nucleic Acid Function and Protein Synthesis (2)**

Prerequisites: Chemistry 560 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.

**CHEM 564. Receptor Biochemistry and Protein Modification (2)**

Prerequisites: Chemistry 560 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)**

One lecture and six hours of laboratory.

Prerequisites: Chemistry 560.

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)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### **GRADUATE COURSES**

### **CHEM 711. Chemical Thermodynamics (3)**

Prerequisites: Chemistry 410B.

Chemical thermodynamics and an introduction to statistical thermodynamics.

### **CHEM 712. Chemical Kinetics (3)**

Prerequisites: Chemistry 410B.

Theory of rate processes; applications of kinetics to the study of reaction mechanisms.

### **CHEM 713. Quantum Chemistry (3)**

Prerequisites: Chemistry 410B.

Quantum mechanics of atomic and molecular systems; applications to chemical bonding theory.

### **CHEM 730. Advanced Topics in Organic Chemistry (1-3)**

Prerequisites: 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 750. Advanced Topics in Analytical Chemistry (1-3)**

Prerequisites: 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)**

Prerequisites: 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 763. Cellular Regulation (2)**

Prerequisites: Chemistry 563.

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)**

Prerequisites: Chemistry 564.

Membrane structure and function. Biophysical and biochemical properties of membranes from procaryotic and eucaryotic cells and animal cell viruses; biosynthesis and assembly of membrane components; molecular basis of solute transport, energy coupling, cell surface transformation, and cellular recognition, adhesion and fusion.

### **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)**

Prerequisites: Consent of department chair.

Presentation of current research by students working towards M.S. degrees. Must be completed before end of second year of study.

### **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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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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## Chicana and Chicano Studies (CCS)

*In the College of Arts and Letters*

### **UPPER DIVISION COURSES**

### **CCS 554. United States-Mexico Transborder Populations and Social Change (3) (Same course as Sociology 554)**

Prerequisites: Sociology 101. Recommended: Chicana and Chicano Studies 355 and/or Sociology 350.

Sociology of the population at the US-Mexico border region. Demographic dynamics and social change in border communities. International migration and transmigration. Transborder families and transnational families. Gender systems and women's reproductive health in border communities.

**CCS 595. US/Mexico Border Field Experience (3)**

Prerequisites: Six upper division units in Chicana and Chicano studies or graduate standing. Working knowledge of Spanish required.

Field Work in US-Mexico border area. Visits to border institutions in Tijuana and San Diego. Dynamics of postmodernity and globalization. Multidisciplinary and critical study of US-Mexico border through research and experience. Classes meet in US and Mexico.

**CCS 596. Topics in Chicana and Chicano Studies (1-3)**

Prerequisites: Consent of instructor.

Advanced topics in Chicana and Chicano 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES**

**CCS 601. Foundations in Chicana and Chicano Scholarship Seminar (3)**

Prerequisites: Graduate standing.

Philosophical, cultural, social thought, and intellectual traditions shaping Chicana and Chicano scholarship. Key paradigms of gender, ethnicity, and socio-economic change.

**CCS 602. Methods of Inquiry in Chicana and Chicano Studies Seminar (3)**

Prerequisites: Graduate standing.

Research methods in Chicana and Chicano studies including evaluation of reported findings. Emphasis on multidisciplinary perspectives.

**CCS 605. Borderlands and Feminist Theories (3)**

Prerequisites: Graduate standing.

Major theories pertaining to U.S.-Mexico borderlands and their gendered and sexual discourses: Chicana feminism, transnationalism, cultural studies, ethnography, narrative, cultural, citizenship, and multiculturalism.

**CCS 696. Topics in Chicana and Chicano Studies (3)**

Prerequisites: Graduate standing.

Key issues in Chicana and Chicano studies. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

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

Prerequisites: Consent of graduate adviser.

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

**CCS 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.

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

Prerequisites: 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.

**CCS 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisites: 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. Registration in 799C limited to two semesters.

**Child and Family Development (CFD)**

*In the College of Education*

**UPPER DIVISION COURSES**

**CFD 536. Divorce and Remarriage (3)**

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)**

Prerequisites: Child and Family Development 375A, 375B, 375C, and two units from Child and Family Development 378A, 378B, 378C, 378D. **Proof of completion of prerequisites required:** Copy of transcript.

Multidisciplinary approach to child abuse and family violence including maltreatment, mistreatment, neglect, sexual abuse.

**CFD 560. Theories in Socio-Emotional Development (3)**

Prerequisites: Child and Family Development 375A, 375B, 375C, and two units from Child and Family Development 378A, 378B, 378C, 378D. **Proof of completion of prerequisites required:** Copy of transcript.

Socio-emotional development from infancy to adulthood. Theory of mind, emotional intelligence, and relationship-based development.

**CFD 575. Public Policy and Professional Ethics in Child and Family Development (3)**

Prerequisites: Child and Family Development 375A, 375B, 375C, two units from Child and Family Development 378A, 378B, 378C, 378D, and Child and Family Development 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)**

Prerequisites: 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. Conflict Resolution Across the Life Span (4)**

Three lectures and three hours of laboratory.

Prerequisites: Child and Family Development 335, 370, 375A, 375B, 375C, two units from Child and Family Development 378A, 378B, 378C, 378D, and Child and Family Development 537 and 560 with an overall grade of C (2.0) or better. **Proof of completion of prerequisites required:** Copy of transcript.

Theories of conflict development and resolution across lifespan. Parenting styles, discipline, behavior and class management, and conflict resolution techniques used in relationships. Directed experiences using conflict resolution techniques in various settings.

**CFD 590. Children with Special Needs (4)**

Three lectures and three hours of laboratory.

Prerequisites: 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.

**CFD 596. Advanced Studies in Child and Family Development (1-6)**

Prerequisites: Nine upper division units in child and family development.

Advanced study of selected topics. May be repeated with new content. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of nine units of 596. No more than six units of 596 may be applied to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES**

**CFD 634. Seminar in Family Processes (3)**

Prerequisites: Child and Family Development 335.

Analysis of selected research in family structure, development, and crisis.

**CFD 660. Seminar in Current Issues and Trends in Child Development (1) Cr/NC**

Prerequisites: Consent of graduate adviser.

Current issues and trends in research and policy making in child development field; career development and opportunities. Maximum credit four units.

**CFD 670. Seminar in Child Development Theories-Intervention and Prevention (3)**

Prerequisites: Six upper division units in child and family development.

Advanced child development theories. Emphasis on intervention and prevention models, theories, research, and applications.

**CFD 671. Seminar in Human Development (3)**

Prerequisites: 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**

Prerequisites: Child and Family Development 670 or 671.

Advanced application of human developmental theories and techniques in various community settings.

**CFD 790. Research Methods and Program Development (3)**

Prerequisites: Approval of graduate program adviser.

Research in child and family development: criteria and procedures for conducting research. Development of programs pertaining to children and families; literature review, proposal development, planning steps for implementation.

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

Prerequisites: 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**

Prerequisites: 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.

**CFD 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisites: 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. Registration in 799C limited to two semesters.

**City Planning (C P)**

*In the School of Public Affairs*

*In the College of Professional Studies and Fine Arts*

**GRADUATE COURSES**

**C P 625. Quantitative Techniques in Urban Planning (3)**

Two lectures and three hours of laboratory.

Prerequisites: Public Administration 604.

Contemporary techniques and methodologies of planning analysis; practicum emphasizing survey research, environmental impact techniques; case studies in demographic and economic analysis.

**C P 630. Seminar in Urban Planning Implementation (3)**

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 660. City Planning and Geographic Information Systems Applications (3)**

Prerequisites: Public Administration 525 and graduate standing.

ArcGIS mapping software extensively utilized in city planning. Proficiency necessary to use software in professional context for work required by public and/or private sector planning employment.

**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 690. Seminar in Land Use Planning Principles and Techniques (3)**

Two lectures and three hours of laboratory.

Prerequisites: 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.

Prerequisites: 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 (3-6) 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 six 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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

## Civil Engineering (CIV E)

*In the Department of Civil, Construction, and Environmental Engineering  
In the College of Engineering*

**NOTE: Proof of completion of prerequisites (copy of transcript) is required for all courses which list prerequisites.**

### UPPER DIVISION COURSES

**CIV E 521. Structural Analysis II (3)**

Prerequisites: 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.

**CIV E 525. Design of Steel Structures (3)**

Prerequisites: 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.

**CIV E 528. Masonry Structures Design (3)**

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)**

Prerequisites: 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.

**CIV E 580. Traffic Engineering Design (3)**

Prerequisites: Civil Engineering 481.

Sizing and configuration of highway facilities based on capacity analysis. Traffic signal design, impact and mitigation studies, parking, safety design.

**CIV E 596. Advanced Civil Engineering Topics (1-3)**

Prerequisites: Minimum grade point average of 3.0 and consent of instructor.

Modern developments in civil engineering. May be repeated with new content. 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### GRADUATE COURSES

**CIV E 605. Prestressed Concrete Structures (3)**

Prerequisites: Civil Engineering 421 with minimum grade of C.

Fundamental concepts of prestressed concrete theory. Design applications to various types of structures.

**CIV E 607. Dynamics of Structures (3)**

Prerequisites: 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.

**CIV E 608. Earthquake Engineering (3)**

Prerequisites: Civil Engineering 607.

Elements of seismology. Methods of analysis for earthquake loads. Procedures and code provisions for the design of earthquake-resistant structures.

**CIV E 610. Finite Element Analysis of Structures (3)**

Prerequisites: 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.

**CIV E 612. Advanced Concrete Materials (3)**

Two lectures and three hours of laboratory.

Prerequisites: 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.

**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.

**CIV E 621. Transportation Demand Analysis (3)**

Prerequisites: 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.

**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.

**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.

**CIV E 633. Environmental Hydrology (3)**

Prerequisites: 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.

**CIV E 634. Surface Water Hydrology (3)**

Prerequisites: Civil Engineering 445.

Hydrologic systems. Physical hydrology. Kinematic wave theory. Diffusion and dynamic wave theories. Watershed and stream channel routing. Hydrologic simulation.

**CIV E 638. Sedimentation and River Engineering (3)**

Prerequisites: 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.

**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.

**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.

**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.

**CIV E 644. Soil Dynamics (3)**

Prerequisites: 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.

**CIV E 696. Advanced Topics in Civil Engineering (2-3)**

Intensive study in specific areas of civil engineering. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**CIV E 781. Seminar in Transportation Engineering (2-3)**

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.

**CIV E 797. Independent Research (1-3) Cr/NC/RP**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

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**Classics (CLASS)**

*In the Department of Classics and Humanities*

*In the College of Arts and Letters*

**UPPER DIVISION COURSE**

**CLASS 599. Special Study (1-3)**

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.

Directed 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.

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**Communication (COMM)**

*In the College of Professional Studies and Fine Arts*

**UPPER DIVISION COURSES**

**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 508. Media Literacy (3)**

Prerequisites: Eighteen units of upper division coursework in the School of Communication. Admission to a major or minor in the School of Communication. **Proof of completion of prerequisites required:** Copy of transcript.

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 555. Conflict Management Communication (3)**

Prerequisites: Communication 300 and 350. Admission to a major or minor in the School of Communication. **Proof of completion of prerequisites required:** Copy of transcript.

Approaches to conflict communication in international, societal, group, institutional, and interpersonal contexts. (Formerly numbered Communication 455.)

**COMM 596. Selected Topics (1-4)**

Prerequisites: Senior standing or above.

Specialized study in selected topics. May be repeated with new content. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.



GRADUATE COURSES

**COMM 601. Seminar: Theory and Research Methods in Communication (3)**

Prerequisites: Admission to communication studies specialization graduate program in the School of Communication.

Communication phenomena, theoretical background, and research techniques to navigate variation among approaches; intellectual history of communication theory.

**COMM 610. Seminar: Advanced Communication Theory (3)**

Prerequisites: Communication 601.

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 601.

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 601.

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: Credit or concurrent registration in Communication 601.

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: Credit or concurrent registration in Communication 601.

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 (3)**

Prerequisites: Credit or concurrent registration in Communication 601.

Intensive study in specific areas of communication. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**COMM 706. Seminar: Organizational Communication (3)**

Prerequisites: Credit or concurrent registration in Communication 601.

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 715. Seminar: Nonverbal Communication (3)**

Prerequisites: Credit or concurrent registration in Communication 601.

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: Credit or concurrent registration in Communication 601.

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: Credit or concurrent registration in Communication 601.

Contemporary theory and research addressing interpersonal verbal and nonverbal communication in intimate and non-intimate relationships.

**COMM 750. Seminar: Selected Topics: Communication Contexts (3)**

Prerequisites: Credit or concurrent registration in Communication 601.

Intensive study in specific contextual forms of communication such as legal interaction, gender, group communication, instructional communication, 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: Credit or concurrent registration in Communication 601.

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 771. Seminar: Intercultural Communication (3)**

Prerequisites: Credit or concurrent registration in Communication 601.

Analysis of cultural influences on human communication acts. Emphasis on cultural values, perception, social organizations, language, and nonverbal codes.

**COMM 792. Seminar: Persuasion (3)**

Prerequisites: Credit or concurrent registration in Communication 601.

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**

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**

Prerequisites: 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.

**Comparative Literature (C LT)**

*In the Department of English and Comparative Literature*

*In the College of Arts and Letters*

UPPER DIVISION COURSES

**NOTE: 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 512. European Literature Before 1800 (3)**

Study of a literary period such as the Middle Ages, Renaissance, or Enlightenment. May be repeated with new content. Maximum credit six units.

### **C LT 513. Nineteenth Century European Literature (3)**

European literature of the nineteenth century or of a more limited period within that century. May be repeated with new content. Maximum credit six units.

### **C LT 514. European Literature Since 1900 (3)**

Study of a literary period such as the Age of Modernism. May be repeated with new content. Maximum credit six units.

### **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, García Márquez, 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)**

Prerequisites: 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 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

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## Computational Science (COMP)

*In the College of Sciences*

### UPPER DIVISION COURSES

#### **COMP 526. Computational Methods for Scientists (3)**

Prerequisites: Mathematics 252 and 254.

Translating mathematical problem descriptions to computer programs. Introduction to Unix system.

#### **COMP 589. Computational Imaging (3)**

Prerequisites: Mathematics 150 and 254.

Mathematical techniques used for image processing and analysis. Emphasis on variational techniques which lead to PDE based image processing algorithms, most are known as diffusion filters, and interface propagation techniques for which emphasis will be implicit representation (level-set methods). Representation and properties of curves and surfaces, statistical (PCA/ICA), and multi-resolution image analysis techniques.

### GRADUATE COURSES

#### **COMP 600. Seminar (1-3)**

Prerequisites: 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 601. Seminar: Business Skills for the Information Age (3)**

Prerequisites: Graduate standing.

Human and infrastructure management issues specific to science and technology workplaces.

#### **COMP 626. Applied Mathematics for Computational Scientists (3)**

Prerequisites: Mathematics 252 and 254.

Linear algebra, differential equations and stability theory, and analytical methods for partial differential equations within the context of computational science.

#### **COMP 670. Seminar: Problems in Computational Science (3)**

Prerequisites: Graduate standing.

Applications of computational science in solving problems using a variety of methods. Problems selected from biology, chemistry, physics, and other fields.

#### **COMP 696. Selected Topics in Computational Science (3)**

Prerequisites: Graduate standing.

Intensive study in specific areas of computational science. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

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

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisites: 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. Registration in 799C limited to two semesters.

#### **COMP 800. Seminar (3)**

Prerequisites: Admission to the doctoral program.

Topics in different areas of computational science.

**COMP 810. Colloquium in Computational Science (1) Cr/NC/RP**

Prerequisites: Admission to the doctoral program.  
Discussions on advances in computational science research. Course to be taken every semester.

**COMP 894. Supervised Research, Qualifying Examination, and Dissertation Proposal (3-9) Cr/NC/RP**

Prerequisites: Admission to the doctoral program and consent of instructor.

Research and preparation for qualifying examination. (Formerly numbered Computational Science 890 and 895.)

**COMP 896. Practicum (1-9) Cr/NC/RP**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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. Enrollment is required during the term in which the student plans to graduate.

## Computer Engineering (COMPE)

*In the Department of Electrical and  
Computer Engineering  
In the College of Engineering*

### UPPER DIVISION COURSES

**NOTE: Prerequisites will be enforced in all 500-level courses. A copy of an official transcript will be accepted as proof. For corequisites, an enrollment confirmation form will be accepted.**

**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. Windows Database and Web Programming (3)**

Prerequisites: Computer Engineering 260.  
Programming applications involving file systems, relational databases, Structured Query Language (SQL), ADO.NET, client-server architecture, multithreading sockets, web servers, web browsers, web services, ASP.NET, Hypertext Markup Language (HTML), and Extensible Markup Language (XML).

**COMPE 565. Multimedia Communication Systems (3)**

Prerequisites: 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 571. Real-Time Operating Systems (3)**

Prerequisites: Computer Engineering 260 and 475.  
Real-time kernel, basic kernel services, threading and synchronization, preemptive multithreading, mutexes, spin locks, critical sections, priority scheduling, interrupts, RTOS implementation, memory management, task management, intertask communications.

**COMPE 572. VLSI Circuit Design (3)**

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)**

Prerequisites: Consent of instructor.  
Modern developments in computer engineering. May be repeated with new content. 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

## Computer Science (CS)

*In the College of Sciences*

### 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)**

Prerequisites: 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)**

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)**

Prerequisites: 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 537. Component GIS Architectures (3)**

Prerequisites: Computer Science 310 or Geography 484.

Customization of Geographic Information Science application development platforms with emphasis on object oriented programming and component architecture. Prominent examples are Map Objects with Visual Basic, Map Objects with Java. Considerable programming effort required, especially in Graphical User Interface development.

### **CS 540. Software Internationalization (3)**

Prerequisites: Computer Science 310.

Principles, techniques, and resources for design and implementation of software localizable to multiple languages and/or cultures, including detailed examination of internationalization features provided by one or more widely used modern programming languages.

### **CS 541. Online Documentation and Help Systems (3)**

Prerequisites: Computer Science 310.

Design, implementation, and maintenance of online documentation and help systems, including authoring principles and standards; theory and practice of single-source content management; survey of available development tools and resources; internationalization; and project management.

### **CS 542. XML for Multilingual and Multicultural Applications (3)**

Prerequisite: Computer Science 310.

Principles, techniques, and resources for designing and utilizing globalized XML documents in multilingual and multicultural information systems.

### **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)**

Prerequisites: 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 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. Kinematics of planar robots. Design and implementation of robot joint controllers. Robot programming languages and environments, and robot command interfaces.

### **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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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 570. Operating Systems (3)**

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 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 multi-processor 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 576. Computer Networks and Distributed Systems (3)**

Prerequisites: Credit or concurrent registration in Computer Science 570.

Basic networking concepts such as seven-layer reference model, transmission media, addressing, subnetting and super-netting, networking devices, LANs and WANs, internetworking, distributed processing, and client-server model. Basic concepts and protocols of TCP/IP protocol suite and basic Internet services.

**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 582. Introduction to Speech Processing (3)**

Prerequisites: Computer Science 310.

Fundamentals of speech processing and speech recognition. Physical aspects of speech production and perception. Mathematical models for speech recognition. Corpus development: data collection, processing, and evaluation. Applications of speech processing and associated research topics.

**CS 596. Advanced Topics in Computer Science (1-4)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES**

**NOTE: Classified graduate standing is expected for all graduate courses.**

**CS 600. Methods in Bioinformatics, Medical Informatics, and Cheminformatics (3)**

Prerequisites: Three units of calculus and graduate standing.

Computer, mathematical, and engineering techniques for bioinformatics, cheminformatics, and medical informatics. Techniques used in microarray data analysis, gene and protein sequence alignment, and classification techniques in medical decision making.

**CS 615. Spatial Database (3)**

Prerequisites: Computer Science 514. Recommended: Computer Science 560.

Strategies for databases in which locations are prominent. Access strategies such as quadtrees and R-trees. Topological and other spatial extensions to query languages. Spatial models like non-intersection. Oracle spatial features. Object and object-oriented databases.

**CS 620. 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. (Formerly numbered Computer Science 620A.)

**CS 632. Advanced Software Engineering (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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 652. Emergent and Adaptive Computation (3)**

Prerequisites: Computer Science 550 or 552.

Computational models based on complex systems. Distributed approaches to adaptation. Emergence of collective behavior. Population-based techniques including swarm optimization, ant-colony algorithms and cellular-automata. Intrusion detection and other applications of artificial immune systems. Classifier systems, evolutionary computation and other adaptive frameworks.

**CS 656. Advanced Robotics (3)**

Prerequisites: 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)

Prerequisites: 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)

Prerequisites: 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)

Prerequisites: Computer Science 570.

Survey of advanced operating systems including distributed systems. Associated design issues. Case studies.

### CS 674. Advanced Computer Architecture (3)

Prerequisites: Computer Science 572.

Advanced computer architecture, including parallel and distributed architecture, and accompanying software and algorithmic issues.

### CS 676. Advanced Computer Networks and Distributed Systems (3)

Prerequisites: Computer Science 576.

Advanced concepts of communication networks and distributed systems that follow basic TCP/IP protocols, such as BOOTP, DHCP, SNMP, IGMP, multicasting and multicast routing, real-time traffic and protocols, voice over IP, quality of service and RSVP, MPLS, virtual private networks, mobile IP.

### CS 678. Broadband Communication Networks (3)

Prerequisites: Computer Science 576.

High performance communication technologies and protocols, SONET/SDH, frame relay (FR) and asynchronous transfer mode (ATM). Concepts and technologies in wireless networks, modulation, spread spectrum, multiple access, wireless LANs, cellular telephony and satellite communication.

### CS 682. Speech Processing (3)

Prerequisites: Graduate standing, Computer Science 310, Mathematics 254, Statistics 551A.

Algorithms and methods for processing of speech. Feature extraction, human speech production and perception, pattern recognition for acoustic and language modeling as applied to automatic speech and speaker recognition.

### CS 683. Emerging Technologies (3)

Prerequisites: 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: 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 696. Selected Topics in Computer Science (3)

Prerequisites: Consent of instructor.

Intensive study in specific areas of computer science. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### CS 790. Practicum in Teaching of Computer Science (1) Cr/NC

Prerequisites: 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.

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

Prerequisites: 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

Prerequisites: 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

Prerequisites: 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

Prerequisites: 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. Registration in 799C limited to two semesters.

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

## Construction Engineering (CON E)

*In the Department of Civil, Construction, and Environmental Engineering  
In the College of Engineering*

**NOTE: Proof of completion of prerequisites (copy of transcript) is required for all courses which list prerequisites.**

### GRADUATE COURSES

#### CON E 650. Construction Labor Productivity (3)

Prerequisites: Construction Engineering 401 and Construction Engineering 301 or Civil Engineering 491.

Definition of productivity measures and factors that affect productivity of construction labor. Quantification techniques of labor productivity in construction.

**CON E 651. Project Production System Design in Construction (3)**

Prerequisites: Construction Engineering 650 or Construction Engineering 310, 401, and 490.

Theory of project production system design. Relation to production management theories, productivity improvement techniques, data gathering techniques to support process evaluation. Civil design and construction operations but also applicable to other industries.

**CON E 652. Construction Operations Modeling and Technology (3)**

Prerequisites: Construction Engineering 310, 401, 651, and Civil Engineering 220.

Modeling and optimizing construction projects and constructed works. Abstraction of projects, process mapping, and activity quantification. Theories of queuing and batching. Numerico-physical modeling of construction operations in time and space. Systems integration.

**CON E 653. Construction Scheduling (3)**

Prerequisites: Construction Engineering 301 and 401.

Construction planning, scheduling and evaluation of planning techniques, labor, and equipment leveling, expecting cost and crashing, resource loading, what if scenarios, and use of scheduling in delay analysis.

**CON E 654. Construction Claims (3)**

Prerequisite: Construction Engineering 301.

Basic foundations construction claims process starting with an understanding of contractual basis for construction claims through final resolution of claims. Clauses that form the basis for claims; recognition of claims, communicating claims elements, pricing claims, and methods for resolving claims.

**CON E 655. Project Design and Portfolio Management (3)**

Prerequisites: Construction Engineering 651 or Civil Engineering 495; and Environmental Engineering 320 or 355.

Techniques for project selection, definition, design management and value generation, including consideration of ROI, feasibility, and portfolio diversification. Incorporation of life-cycle considerations into all levels of design, including concepts of sustainability. Owner, designer, and contractor perspectives.

**For additional courses in construction engineering, refer to "Civil Engineering" in this section of the bulletin.**

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## Counseling and School Psychology

(CSP)

*In the College of Education*

**UPPER DIVISION COURSE**

**CSP 596. Selected Studies (1-3)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES**

**CSP 600. Cross-Cultural Counseling Communication Skills (2)**

Prerequisites: 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**

Prerequisites: 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 counselors, school psychologists, marriage-family therapists and their clients. Approaches and applications for counseling and therapy. Research on counseling and marriage and family therapy.

**CSP 606. Professional Issues in Mental Health Practice (3)**

Prerequisites: Counseling and School Psychology 600 and 600L.

Legal, ethical, and professional issues in counseling and marriage and family therapy practice, research, and training. Cultural underpinnings and clinical implications of legal and ethical codes. (Formerly numbered Counseling and School Psychology 607A-607B.)

**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.

**CSP 610. Determinants of Human Behavior (1-3)**

Implications of theory and research in behavioral sciences for the understanding of human behavior.

**A.** Personality

**B.** Social and Cultural

**C.** Development

**D.** School Learning

**E.** Biological

**CSP 611. Seminar in Determinants of Human Behavior: Trauma (3) (Offered only in Extension)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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.

**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 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.

**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 school counselors facilitating teaching-learning. Evaluating needs and outcomes with implications for interventions, programs, and school practices.

**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)**

Prerequisites: 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.

**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)**

Prerequisites: 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)**

Prerequisites: 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 643. Psychoeducational Evaluation Techniques (1) Cr/NC**

Prerequisites: 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 school 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)**

Prerequisites: 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)**

Prerequisites: 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 in Multicultural Couple and Family Therapy Practice (3)**

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)**

Prerequisites: 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)**

Prerequisites: Counseling and School Psychology 601.

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)**

Prerequisites: 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 symptomatology, and professional and ethical issues.

**CSP 691. Violence in Couples' Relationships (1)**

Prerequisites: 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, 625, 625L.

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)**

Prerequisites: 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)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**CSP 697. Special Topics in Trauma Studies (1)  
(Offered only in Extension)**

Prerequisites: 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.

Study of selected areas in counseling, marriage and family therapy, school 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**

Prerequisites: Counseling and School Psychology 601 or 662 or 670.

Application of concepts and procedures of counseling, school 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**

Prerequisites: Counseling and School Psychology 601.

Supervised experience in counseling, school 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**

Prerequisites: Counseling and School Psychology 670.

Supervised experience in group counseling and/or 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 752. Seminar and Practicum: School Psychology (3-6) Cr/NC**  
Nine hours of practicum for three units.

Prerequisites: Counseling and School Psychology 730.

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 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**

Prerequisites: 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)**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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 790A. Specialist's Project in School Psychology (3) Cr/NC/RP**

Prerequisites: Advancement to candidacy for the Ed.S. degree.

Preparation of an applied research project for the educational specialist degree in school psychology.

**CSP 790B. Specialist's Project Extension (3) Cr/NC**

Prerequisites: Grade symbol of RP in Counseling and School Psychology 790A.

Registration required in any semester or term following assignment of RP in Counseling and School Psychology 790A in which the student expects to use the facilities and resources of the university. Student must be registered in the course when the completed project is granted final approval.

**CSP 798. Special Study (1-6) Cr/NC/RP**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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 or Ed.S. degree. Registration in 799C limited to two semesters.

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**Criminal Justice (CJ)**

*In the School of Public Affairs*

*In the College of Professional Studies and Fine Arts*

**UPPER DIVISION COURSES**

**CJ 510. Contemporary Issues in Law Enforcement (3)**

Prerequisites: Criminal Justice 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. (Formerly numbered Criminal Justice Administration 510.)

**CJ 520. Prosecutorial Function (3)**

Prerequisite: Criminal Justice 300.

Prosecutor's function at local, state, and federal levels and in selected foreign nations, including appraisal of proposed national standards and goals for prosecutors. (Formerly numbered Criminal Justice Administration 520.)

**CJ 531. Probation and Parole (3)**

Prerequisites: Criminal Justice 300.

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. (Formerly numbered Criminal Justice Administration 531.)

**CJ 540. Applied Planning, Research, and Program Evaluation in Criminal Justice (3)**

Prerequisite: Criminal Justice 300.

Application of planning, research, program development, and evaluation principles to field of criminal justice. (Formerly numbered Criminal Justice Administration 540.)

**CJ 543. Community Resources in Criminal Justice (3)**

Prerequisites: Criminal Justice 300.

Present and probable roles of public and private agencies and volunteers in criminal justice. (Formerly numbered Criminal Justice Administration 543.)

**CJ 570. Organized Crime: Domestic and International Perspectives (3)**

Prerequisites: Criminal Justice 300.

Interdisciplinary analysis of organized crime's impact on criminal justice and public policy on both domestic and international levels. (Formerly numbered Criminal Justice Administration 570.)

**GRADUATE COURSES****CJ 601. Seminar in the Administration of Criminal Justice (3)**

Prerequisites: Criminal Justice 301.

Administrative problems of criminal justice systems. (Formerly numbered Criminal Justice Administration 601.)

**CJ 602. Seminar in Comparative Criminal Justice System (3)**

Prerequisites: Criminal Justice 301.

The criminal justice system as both cause and consequence of social change; nature of institutional change with application to criminal justice system components. (Formerly numbered Criminal Justice Administration 602.)

**CJ 603. Seminar in Community 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. (Formerly numbered Criminal Justice Administration 603.)

**CJ 604. Seminar in Criminal Justice and Urban Administration (3)**

Prerequisites: Criminal Justice Administration 540.

Influences on crime control and criminal justice process of actions by urban administrators, legislators and private sector in areas such as housing, education, public health and transportation, and urban development policies. (Formerly numbered Criminal Justice Administration 604.)

**CJ 605. Seminar in Juvenile Justice and Youth Violence (3)**

Prerequisites: 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. (Formerly numbered Criminal Justice Administration 605.)

**CJ 696. Selected Topics in Criminal Justice (3)**

Prerequisites: Criminal Justice 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**CJ 791. Seminar in Readings in Criminal Justice (3)**

Prerequisites: Six graduate units in criminal justice.

Selected readings in the literature of criminal justice. (Formerly numbered Criminal Justice Administration 791.)

**CJ 796. Internship in Criminal Justice (3-12) Cr/NC**

Prerequisites: 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. (Formerly numbered Criminal Justice Administration 796.)

**CJ 797. Research in Criminal Justice (3) Cr/NC/RP**

Prerequisites: Consent of coordinator of criminal justice.

Research in one of the areas of criminal justice administration. Maximum credit six units applicable to a master's degree. (Formerly numbered Criminal Justice Administration 797.)

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

Prerequisites: Consent of staff; to be arranged with coordinator and instructor.

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

**CJ 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.

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

Prerequisites: 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.

**CJ 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisites: 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. Registration in 799C limited to two semesters.

**Dance (DANCE)**

*In the School of Music and Dance*

*In the College of Professional Studies and Fine Arts*

**GRADUATE COURSES****DANCE 696. Special Topics in Dance (1-3)**

Prerequisites: Graduate standing.

Specialized study of selected topics in dance. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

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

Prerequisites: Graduate standing, consent of school director and instructor.

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

**Economics (ECON)**

*In the College of Arts and Letters*

**UPPER DIVISION COURSES****ECON 507. Mathematical Economics (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Consent of instructor.

Intensive study in specific areas of economics. May be repeated with new content. 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 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

## **GRADUATE COURSES**

### **ECON 630. Microeconomic Theory (3)**

Prerequisites: 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)**

Prerequisites: 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 640L. Econometrics Laboratory I (1)**

Two hours of laboratory for 12 weeks.

Prerequisites: Concurrent registration in Economics 640.

Data analysis and econometric modeling using SAS. Applied statistical skills and SAS programming skills necessary to perform advanced data analysis to construct datasets, build, and estimate statistical models covered in Economics 640.

### **ECON 641. Applied Research in Econometrics (3)**

Prerequisites: 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 641L. Econometrics Laboratory II (1)**

Two hours of laboratory for 12 weeks.

Prerequisites: Concurrent registration in Economics 641.

Data analysis and econometric modeling using STATA. Applied statistical skills and STATA programming skills necessary to perform advanced data analysis to construct datasets, build, and estimate statistical models covered in Economics 641.

### **ECON 696. Experimental Topics (3)**

Prerequisites: Consent of instructor.

Intensive study in specific areas of economics. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### **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)**

Prerequisites: 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)**

Prerequisites: 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 History of Economic Thought (3)**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

**Education (ED)**

*In the College of Education*

**UPPER DIVISION COURSE****ED 516. Foundations of Bilingual Education (1)  
(Offered only at IVC)**

Prerequisites: Credit or concurrent registration in Education 451.

Overview of models of bilingual education programs for language minority students.

**GRADUATE COURSES**

**NOTE: Twelve units of professional education are prerequisite for enrollment in all graduate courses.**

**ED 601. Schools and the Pedagogy of Health Education (3)**

Prerequisites: Preliminary multiple or single subject teaching credential.

Focus on relationship between health and learning, and how to access community resources that support student health. Applicable to the Teacher Induction Certificate Program. Not acceptable on a master's degree.

**ED 690. Methods of Inquiry (3)**

**(Selected sections offered as distance education)**

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)**

Prerequisites: Teaching experience.

Intensive study in specific areas of education. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**ED 791A. Evaluation Techniques (3)**

**(Selected sections offered as distance education)**

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)**

**(Selected sections offered as distance education)**

791B: Lecture. 791C: Independent study.

Prerequisites: Education 791A and advancement to candidacy for the Master of Arts degree in education. Education 791B and 791C may be taken concurrently.

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)**

**(Selected sections offered as distance education)**

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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

**DOCTORAL COURSES****ED 801. Seminar on Social and Cultural Foundations of Multicultural Education (3-4)**

Prerequisites: 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 Development and Implementation (3)**

Prerequisites: Admission to doctoral program.

Curriculum development and implementation to include culturally diverse contexts with emphasis on reflective implementation and critical analysis of commercial and site-based curriculum.

### **ED 814. Seminar in Curricular Change Processes (3)**

Prerequisites: Education 810.

Curriculum change processes in educational organizations. Process of planning change and elements necessary for implementing and managing curriculum change to include diverse cultural contexts.

### **ED 815. Re-Thinking Leadership (3)**

Prerequisites: Admission to educational leadership doctoral program.

Concepts of individual and group leadership in educational environments. Practices and policies of effective management and leadership; ethical and emerging trends in leadership styles. (Formerly numbered Educational Leadership 810.)

### **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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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 in Educational Technology Research and Development (3)**

Prerequisites: 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.

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 836. Research and Writing Support (2-3) Cr/NC**

Prerequisites: Admission to educational leadership doctoral program.

Identification and clarification of a researchable problem in PreK-12 and community college leadership; analysis of related literature, investigation of possible methodology; application to Institutional Review Board. Maximum credit nine units.

### **ED 840. Seminar in Leadership in a Diverse Society (3)**

Prerequisites: Admission to educational leadership doctoral program.

Theories and practices for achieving schools informed by and built around participation of diverse communities and cultures. Intersection of leadership with socio-historical, socio-cultural, and social justice theories. (Formerly numbered Educational Leadership 840.)

### **ED 850. Seminar in Quantitative Methods of Inquiry (3)**

Prerequisites: A master's level course in research methods and admission to 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 855. Seminar in Leadership for Developing Educational Systems (3)**

Prerequisites: Admission to educational leadership doctoral program.

Skills and processes to lead the development of educational systems. Development of educational systems into learning organizations through organizational communications, adult learning, and professional development. (Formerly numbered Educational Leadership 850.)

### **ED 860. Seminar in Leadership and Educational Change (3)**

Prerequisites: Admission to educational leadership doctoral program.

Complexities of educational change. Models of organizational change and specific leadership skills and strategies; action plans for educational leadership challenges.

### **ED 885. Seminar in Educational Program Planning and Evaluation (3)**

Prerequisites: Admission to educational leadership doctoral program.

Effective monitoring of and evaluating systems for educational program improvement and policymaking. (Formerly numbered Educational Leadership 885.)

### **ED 890. Advanced Seminar in Processes of Reading (3)**

Prerequisites: 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)**

Prerequisites: 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**

Prerequisites: 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.

**ED 997. Special Topics in Education (0.5-6)  
(Offered only in Extension)**

Prerequisites: 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.

**Educational Leadership (EDL)**

*In the College of Education*

**UPPER DIVISION COURSE**

**EDL 596. Topics in Educational Leadership (1-3)**

Selected problems in educational leadership. May be repeated with new content. 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES**

**EDL 600. Principles of Educational Administration (3)**

Prerequisites: Admission to Preliminary Administrative Services Credential program and classified graduate standing.

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.

**EDL 620. Seminar in Educational Facility Community Engagement and Master Planning (2)  
(Offered only as a distance education course)**

Prerequisites: Admission to Certificate in Educational Facility Planning.

Models of community partnership processes, methods for determining accurate enrollment projections, and stages, timelines, and processes for designing and implementing a school facility project.

**EDL 621. Seminar in Designing Schools to Support Diverse Learning Style Needs (2)  
(Offered only as a distance education course)**

Prerequisites: Admission to Certificate in Educational Facility Planning.

Linking school design to learning and teaching styles, enhancing opportunities for differentiated instruction within classrooms.

**EDL 622. Seminar in Educational Facility Pre-Design Planning (2)  
(Offered only as a distance education course)**

Prerequisites: Admission to Certificate in Educational Facility Planning.

Components of school facility pre-design planning, processes for deriving essential information, strategies for documenting detail, and means to connect planning with design.

**EDL 623. Seminar in Educational Facility Design Process (2)  
(Offered only as a distance education course)**

Prerequisites: Admission to Certificate in Educational Facility Planning.

Architectural/engineering design process of school facilities, including who is involved, how they are involved, when, why, and intended outcomes of process.

**EDL 624. Seminar in Educational Facility Implementation (2)  
(Offered only as a distance education course)**

Prerequisites: Admission to Certificate in Educational Facility Planning.

School facility capital project management from initial conception through planning, design, construction, and post-occupancy phases, presenting various project delivery models and defining role of stakeholders in each phase.

**EDL 625. Seminar in Educational Facility Assessment and Maintenance (2)  
(Offered only as a distance education course)**

Prerequisites: Admission to Certificate in Educational Facility Planning.

Purpose and methods of school facility life cycle assessment, indicators of quality, assessment instruments, maintenance programs as an assessment tool, and procedures and policies for institutionalizing assessment.

**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 640. Educational Leadership in School Community Relations (3)**

Prerequisites: Admission to MA degree or tier 1 credential program; Educational Leadership 600 and 610.

Increasing family and community involvement in schools. Improving student achievement through using educational leadership strategies and resources.

**EDL 652. Seminar in Instructional Improvement and Evaluation (3)**

Prerequisites: Admission to Preliminary Administrative Services Credential program and classified graduate standing.

Improvement of instruction through application of principles and practices in assessment of teaching competency; development of teaching profiles; leadership skills in working with teachers to improve performance. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 652.)

**EDL 655. Communication, Problem Solving, and Decision Making in PK12 (3)**

Prerequisites: Admission to Preliminary Administrative Services Credential program and classified graduate standing.

Educational leadership principles and practices for communication, problem solving, and decision making in Pre K-12 schools and educational organizations. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 655.)

### **EDL 660. Field Experience in Educational Leadership (1-6) Cr/NC/RP**

Prerequisites: Educational Leadership 680 and 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)**

Prerequisites: 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.

### **EDL 696. Advanced Topics in Educational Leadership (1-3)**

Intensive study in specific areas of educational leadership. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### **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.

### **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.

### **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.

### **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.

### **EDL 760. Practicum in PreK-12 Educational Organizations (2-6) Cr/NC/RP**

Prerequisites: Consent of instructor.

Internship for preK-12 educational administrators. Application to take this course must be made in the preceding semester by pre-registration with the credential program coordinator. Released time may be required. May be repeated. Maximum credit 12 units applicable to the Professional Administrative Services Credential.

### **EDL 798. Special Study (1-6) Cr/NC/RP**

Prerequisites: 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.

### **EDL 800. Leadership Research Practicum (0.6-1.3) (1-2 quarter units) Cr/NC**

Prerequisites: Admission to the SDSU/UCSD/CSUSM doctoral program and concurrent registration in one of the following courses: Educational Leadership 830 or Education 815, 840, 855.

Participation and observation of leadership practices in local schools and educational settings.

### **EDL 830. Leadership for Learning (3)**

Prerequisites: Admission to educational leadership doctoral program.

Models of curriculum, instruction, and school organization. The leader's role and responsibility in developing evidence-based decision making cultures that promote student achievement.

### **EDL 855. Advanced Educational Leadership Research Practicum (1.3) (2 quarter units)**

Prerequisites: Admission to SDSU/UCSD/CSUSM doctoral program and concurrent registration in Education 855.

Participation and observation of leadership practices in local schools and educational settings.

### **EDL 880. Seminar in Topics in Educational Leadership (3)**

Prerequisites: Admission to educational leadership doctoral program.

Topical issues in field of educational leadership that have broad implications for research and practice in educational leadership. Maximum credit six units applicable to Ed.D. in educational leadership.

### **EDL 899. Doctoral Dissertation (1-15) Cr/NC/RP (Offered only in Extension)**

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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## Educational Technology (EDTEC)

*In the College of Education*

### UPPER DIVISION COURSES

**NOTE: Distance education courses are offered through the College of Extended Studies.**

### **EDTEC 532. Producing Digital Learning Media for Nonmajors (1-3)**

Two hours of activity per unit.

Digital learning media production for professionals in health, law, science, business, publishing, and other settings. Use of web- and video-based technologies, presentation and data analysis tools for training and education. Not open to students in educational technology degree or certificate programs.

### **EDTEC 540. Educational Technology (3)**

**(Selected sections offered as distance education)**

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)**

**(Selected sections offered as distance education)**

One lecture and six hours of laboratory.

Prerequisites: 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)**  
(Selected sections offered as distance education)

One lecture and six hours of laboratory.  
Prerequisites: Educational Technology 540 and 541. Meet department Writing Skills Requirement.

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)**  
(Selected sections offered as distance education)

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)**  
(Selected sections offered as distance education)

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)**  
(Selected sections offered as distance education)

Prerequisites: 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)**  
(Selected sections offered as distance education)

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 590. Evaluation Techniques for the Performance Technologist (3)**  
(Selected sections offered as distance education)

Two lectures and three hours of activity.  
Prerequisites: Educational Technology 540 and 541. Recommended: Education 690.  
Evaluation techniques and tools for performance technologists.

**EDTEC 596. Topics in Educational Technology (1-3)**  
(Selected sections offered as distance education)

Selected problems in educational technology. May be repeated with new content. 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES**

**EDTEC 640. Psychology of Technology-Based Learning (3)**  
(Selected sections offered as distance education)

Six hours of activity.  
Prerequisites: 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 650. Distance Education (3)**  
(Selected sections offered as distance education)

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 670. Exploratory Learning Through Simulation and Games (3)**  
(Selected sections offered as distance education)

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)**  
(Selected sections offered as distance education)

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)**  
(Selected sections offered as distance education)

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)**  
(Selected sections offered as distance education)

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)**  
(Selected sections offered as distance education)

Prerequisites: 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**

Prerequisites: Consent of staff; to be arranged with department chair.  
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**

Prerequisites: 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.

### Electrical Engineering (E E)

*In the Department of Electrical and  
Computer Engineering  
In the College of Engineering*

#### UPPER DIVISION COURSES

**NOTE: Prerequisites will be enforced in all 500-level courses. A copy of an official transcript will be accepted as proof. For corequisites, an enrollment confirmation form will be accepted.**

**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.

Prerequisites: 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 312).

Instrumentation systems to monitor, image, control, and record physiological functions.

#### E E 522. Digital Control Systems (3)

Prerequisites: Electrical Engineering 420.

Digital controls systems; design algorithms including analog-invariance methods, direct digital techniques, and non-parametric approaches such as fuzzy control, neural networks, and evolutionary systems; implementation considerations. (Formerly numbered Electrical Engineering 622.)

#### 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)

Prerequisites: 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)

Prerequisites: 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)

Prerequisites: Electrical Engineering 450. 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)

Prerequisites: 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)

Prerequisites: 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 and Systems (3)

Prerequisites: 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)

Prerequisites: 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. Digital Communications (3)

Prerequisites: Electrical Engineering 458.

Design of baseband digital communication systems; noise characterization, sampling, quantization, matched filter receivers, bit-error performance, inter-symbol interference, link budget analysis.

#### E E 558L. Communications and Digital Signal Processing Laboratory (1)

Prerequisites: Credit or concurrent registration in Electrical Engineering 556 or 558.

Experiments in modulation techniques, effects of noise on system performance, digital filters, and signal processing.

#### E E 580. Power System Analysis (3)

Prerequisites: Engineering 280, Electrical Engineering 310 and 380.

Modern power system elements; calculation of load flow, fault currents, and system stability.

#### E E 581. Power System Dynamics (3)

Prerequisites: Electrical Engineering 580.

Three-phase faults, symmetrical components, unsymmetrical faults, protective relay operating principles, economic dispatch of thermal power generation units, power system controls, voltage and power stability.

#### E E 596. Advanced Electrical Engineering Topics (1-3)

Prerequisites: Consent of instructor.

Modern developments in electrical engineering. May be repeated with new content. 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

#### GRADUATE COURSES

**NOTE: 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)

Prerequisites: 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 620. Linear System Theory and Design (3)

Prerequisites: Electrical Engineering 420.

State models and solutions of the state equations, stability, controllability and observability, realizability and minimal realizations, linear state and output feedback control, introduction to linear optimal control.

**E E 625. Linear Optimal Control (3)**

Prerequisite: Electrical Engineering 620.

Optimal control with emphasis on quadratic methods; regulation and tracking using state-feedback; deterministic and statistical estimator design; frequency shaping and model reduction; singular perturbation techniques and suboptimal control; applications to flight control, robotics and control of power systems.

**E E 631. RF Electronic Circuits (3)**

Prerequisites: Electrical Engineering 410, 430, and 553.

Distinguishing characteristics of RF circuits; analysis of noise and nonlinearity in circuits; frequency-selective and impedance-matching networks. RF amplifiers, oscillators and frequency conversion circuits. Phase-locked loops and their applications.

**E E 634. RF Circuit Design (3)**

Prerequisites: Electrical Engineering 540.

RF component and circuit design in frequency domain and scattering parameter terms. Linear amplifiers, stability considerations, unilateralization, matching techniques, low-noise amplifiers, wideband designs, power amplifiers, linearity considerations, oscillators, and mixers.

**E E 641. RF Wireless Systems (3)**

Prerequisites: Electrical Engineering 450, 553, 558.

Characteristics and performance measures of RF subsystem in wireless communication systems: wireless channel, antenna, modulators and demodulators, low-noise and power amplifiers, oscillators, ADC and DAC; receiver architectures, system-level design of RF front-end.

**E E 642. Optical Communications (3)**

Prerequisites: 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 645. Antennas and Propagation (3)**

Prerequisites: Electrical Engineering 540.

Impedance characteristics and radiation patterns of thin linear antenna elements; field intensity calculations. Tropospheric and ionospheric propagation; propagation anomalies.

**E E 650. Modern Communication Theory (3)**

Prerequisites: Electrical Engineering 553 and 558.

Wireless digital communication; bandpass modulation and demodulation, multiple access techniques, broadband signaling techniques, spread spectrum techniques; applications include CDMA and OFDM.

**E E 652. Principles and Applications of Information Theory (3)**

Prerequisites: Electrical Engineering 553 and 558

Information measure of data sources; Shannon's theorem and capacity of communication links; rate-distortion theory and performance of source codes.

**E E 653. Coding Theory (3)**

Prerequisites: Electrical Engineering 558.

Error control for digital information; arithmetic of Galois fields; block, cyclic, convolutional and turbo encoding and decoding; applications in digital communication and computer systems.

**E E 654. Adaptive Algorithms (3)**

Prerequisites: Electrical Engineering 556.

Adaptive DSP algorithms. Time varying, data dependent filters, adaptive predictors, cancelers, equalizers. LMS and RLS algorithms, tapped delay line, lattice, and decision feedback structures. Adaptive beam forming and beam steering.

**E E 655. Modem Design (3)**

Prerequisites: Electrical Engineering 556 and 558.

System level and DSP design of modems for wireless and wireline communications. Study modems for QAM, OFDM, CDMA, and T-1 modulation.

**E E 656. Multirate Signal Processing (3)**

Prerequisites: Electrical Engineering 556.

DSP techniques for sample rate changes in digital filters. Decimation and interpolation, aliasing as a processing option in resampling filters. Applications in communication and entertainment media systems.

**E E 657. Digital Image Processing (3)**

Prerequisites: 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)**

Prerequisites: 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 660. High Speed Networks: Design Principles and Recent Advances (3)**

Prerequisites: Computer Engineering 560.

Provides students with knowledge of recent developments in area of computer networks. Current research in high speed computer networks.

**E E 662. Wireless Sensor Networks (3)**

Prerequisite: Computer Engineering 560.

Sensor platforms, wireless channel characteristics, time synchronization, medium access control, topology control, routing protocols, localization, coverage and placement, detection and tracking, query processing.

**E E 665. Multimedia Wireless Networks (3)**

Prerequisites: Computer Engineering 560 and 565.

Multimedia source characteristics, compressed bitstreams, error resiliency, quality of service, cellular video telephony, multimedia QoS-aware WLAN, peer to peer networks, and multimedia broadcast multicast services.

**E E 672. VLSI System Design (3)**

Prerequisites: Computer Engineering 572.

Design of microprocessor data paths and controllers, memory management, pipelines, multipliers, Risc and multiprocessor systems and applications.

**E E 675. Hardware and Software Co-Design (3)**

Prerequisites: Computer Engineering 475.

Hardware/software co-design and co-verification for a 32-bit microprocessor core based embedded System-on-Chip (SoC) that includes memory, peripherals, direct-memory access, and bus design.

**E E 678. Advanced Computer Design (3)**

Prerequisites: 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)**

Prerequisites: Electrical Engineering 675.

Principles of real-time programming and software engineering for microprocessor systems. Concurrent programming and multi-tasking. Structured programming. Software validation. Team programming projects.

**E E 685. Micro-Electro-Mechanical Systems (MEMS) Design and Applications (3)  
(Same course as Mechanical Engineering 685)**

Prerequisite: Mechanical Engineering 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)**

Prerequisites: 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 720. Advanced Topics in Control/Power Systems (1-3)**

Prerequisites: Graduate level coursework in the area and consent of instructor.

Selected topics in automatic control, robotics, and power system. May be repeated with new content and consent of graduate adviser. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

### **E E 730. Advanced Topics in Electronics (1-3)**

Prerequisites: Graduate level coursework in the area and consent of instructor.

Selected topics in microelectronics, electronic instrumentation, and integrated circuit design. May be repeated with new content and consent of graduate adviser. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

### **E E 740. Advanced Topics in Physical Electronics (1-3)**

Prerequisites: Graduate level coursework in the area and consent of instructor.

Selected topics in electromagnetic fields and waves, optoelectronics, and semiconductor devices. May be repeated with new content and consent of graduate adviser. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

### **E E 750. Advanced Topics in Communications (1-3)**

Prerequisites: Graduate level coursework in the area and consent of instructor.

Selected topics in communication theory, wireless and wireline systems, and telecommunications engineering. May be repeated with new content and consent of graduate adviser. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

### **E E 770. Advanced Topics in Computer Engineering (1-3)**

Prerequisites: Graduate level coursework in the area and consent of instructor.

Selected topics in computer and digital system engineering. May be repeated with new content and consent of graduate adviser. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

### **E E 795. Internship/Practicum (1) Cr/NC**

Prerequisites: Eighteen units of graduate level coursework in electrical engineering and consent of adviser.

Supervised internship or practicum experience with approval of graduate adviser. Not applicable to an advanced degree. Maximum credit three units.

### **E E 797. Research (1-6) Cr/NC/RP**

Prerequisites: Consent of department chair. Open only to students in Plan A Thesis.

Research in engineering. Maximum credit six units applicable to a master's degree for students in Plan A only.

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

Prerequisites: Consent of department chair.

Individual study. Maximum credit three units applicable to a master's degree for students in Plan B study.

### **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**

Prerequisites: 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**

Prerequisites: Completion or concurrent enrollment in degree program courses.

Registration required for all students taking the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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## Engineering (ENGR)

*In the College of Engineering*

### UPPER DIVISION COURSE

#### **ENGR 510. Methods of Analysis (3)**

Prerequisites: 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)

**NOTE: 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, construction, and environmental, or mechanical), and contact the director of the doctoral program.**

### GRADUATE COURSES

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

Prerequisites: Consent of instructor.

Research in engineering. Maximum credit six units applicable to a master's degree.

#### **ENGR 798. Special Study (1-6) Cr/NC**

Prerequisites: Graduate standing and consent of Associate Dean of College of Engineering.

Individual study. Maximum credit six units applicable to Master of Engineering degree.

#### **ENGR 799A. Project (3) Cr/NC/RP**

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

Preparation of a project for the master's degree.

#### **ENGR 799B. Project Extension (0) Cr/NC**

Prerequisites: Prior registration in 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 project is granted final approval.

#### **ENGR 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisites: 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.

#### **ENGR 800. Seminar (1) Cr/NC**

Prerequisites: 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**

Prerequisites: Admission to the doctoral program.

Discussions on advances in research in engineering science/applied mechanics conducted by SDSU and UCSD faculty.

#### **ENGR 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisites: 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**

Prerequisites: 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.

**Engineering Mechanics (EM)**

*In the Department of Aerospace Engineering and Engineering Mechanics*

*In the College of Engineering*

**UPPER DIVISION COURSES**

**E M 510. Finite Element Methods in Aerospace Structures (3)**

Prerequisites: 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 596. Advanced Engineering Mechanics Topics (1-3)**

Prerequisites: Consent of instructor.  
Modern developments in engineering mechanics. May be repeated with new content. 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES**

**E M 600. Seminar (1-3)**

Prerequisites: 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 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 727. Theory of Elastic Stability (3)**

Prerequisites: 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**

Prerequisites: Consent of graduate adviser.  
Research in engineering. Maximum credit six units applicable to a master's degree.

**English (ENGL)**

*In the Department of English and Comparative Literature*

*In the College of Arts and Letters*

**UPPER DIVISION COURSES**

**NOTE: Prerequisite for all 500-level courses: Six lower division units in courses in literature and/or creative writing.**

**ENGL 501. Literature for Children (3)**

Critical analysis of literature intended for children. Study of texts and illustrations. This course cannot be used in place of English 401 to satisfy General Education requirements.

**ENGL 502. Adolescence in Literature (3)**

Prerequisites: 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)**

Prerequisites: Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units; completed Writing Proficiency Assessment with a score of 8 or higher (or earned a C or higher in RWS 280, 281, or LING 281 if score on WPA was 7 or lower); and completed General Education requirements 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 519. Ethnic Literatures of the United States (3)**

Prerequisites: 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)**

Prerequisites: 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)**

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)**

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)**

Representative works by United States writers from 1860 to 1920; likely to include works by Charles Chesnut, Kate Chopin, Stephen Crane, Emily Dickinson, Henry James, Mark Twain, Edith Wharton, and others.

### **ENGL 524. Literature of the United States, 1920-1960 (3)**

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)**

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 outcast 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 (3)**

Study of a specific literary genre or genres, such as the novel, tragedy, epic, and lyric. May be repeated with new title and content. See *Class Schedule* for specific content. Maximum credit six units.

### **ENGL 528. Authors (3)**

Works of a major author or, if useful comparisons and juxtapositions warrant, works of two or three authors, such as Jane Austen, Melville, Emerson, and Thoreau. May be repeated with new title and content. See *Class Schedule* for specific content. Maximum credit six units.

### **ENGL 530. Chaucer (3)**

Chaucer's works, with emphasis on *The Canterbury Tales* and *Troilus and Criseyde*.

### **ENGL 533. Shakespeare (3)**

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)**

Prerequisites: 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. British Literary Periods, Beginnings to 1660 (3)**

Prerequisites: Six lower division units in literature and/or creative writing courses.

Study of a literary period such as the Middle Ages or Renaissance. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units.

### **ENGL 537. Milton (3)**

Milton's writings, with emphasis on *Paradise Lost*.

### **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. British Literary Periods, 1660-1800 (3)**

Prerequisites: Six lower division units in literature and/or creative writing courses.

Study of a literary period such as the Restoration or Enlightenment. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units.

### **ENGL 543. British Literary Periods, 1800-1900 (3)**

Prerequisites: Six lower division units in literature and/or creative writing courses.

Study of a literary period such as the Romantic or Victorian Age. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units.

### **ENGL 544. British Literary Periods, 1900-Present (3)**

Prerequisites: Six lower division units in literature and/or creative writing courses.

Study of a literary period such as the Postmodern Era. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units.

### **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 563. Literature and Culture (3)**

Prerequisites: Six lower division units in literature and/or creative writing courses.

Study of literature in relation to a specific culture idea or phenomenon, such as literature and the law, literature and technology. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units.

### **ENGL 570. Techniques of Poetry (3)**

Prerequisites: English 280.

Techniques of poetry from the 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: English 570.

A creative writing workshop in poetry. Continuation of English 570. Maximum credit six units.

### **ENGL 581W. Writing of Fiction (3)**

Prerequisites: English 280. Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units; completed Writing Proficiency Assessment with a score of 8 or higher (or earned a C or higher in RWS 280, 281, or LING 281 if score on WPA was 7 or lower); and completed General Education requirements 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)**

Prerequisites: 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)**

Prerequisites: English 280. Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units; completed Writing Proficiency Assessment with a score of 8 or higher (or earned a C or higher in RWS 280, 281, or LING 281 if score on WPA was 7 or lower); and completed General Education requirements 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 nonfiction, especially the essay as an art form. Maximum credit six units.

**ENGL 587. Writing the Screenplay (3)**

Prerequisites: 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 degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES****ENGL 600. Introduction to Graduate Study (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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. Seminar: 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
- D. Children's Literature

**ENGL 606. Seminar: A Literary Type (3)**

Prerequisites: 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
- D. Children's Literature (Formerly numbered English 607.)

**ENGL 624. British Literature (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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 combined credit of six units of 526 or 549 applicable to a 30-unit master's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**ENGL 700. Seminar: A Major Author or Authors (3)**

Prerequisites: English 600 and 602.

Critical study of a major author or authors such as William Shakespeare, Charles Dickens, Edith Wharton, Marcel Proust, Gabriel García Márquez, Toni Morrison 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 postmodernity, regionalism, ethnicity, the urban experience, gender, the political novel. 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, cultural studies, semiotics, deconstruction, 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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, children's, 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) Cr/NC/RP**

Prerequisites: 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**

Prerequisites: 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 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.

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

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

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## Environmental Engineering (ENV E)

*In the Department of Civil, Construction, and*

*Environmental Engineering*

*In the College of Engineering*

**NOTE: Proof of completion of prerequisites (copy of transcript) is required for all courses which list prerequisites.**

### UPPER DIVISION COURSES

**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.

**ENV E 554. Process Fundamentals of Environmental Systems (3)**

Prerequisites: Minimum grade of C in Environmental Engineering 355, Civil Engineering 444, Engineering Mechanics 340, and Mechanical Engineering 352.

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.

**ENV E 556. Air Pollution Engineering (3)**

Prerequisites: Environmental Engineering 355.

Sources of air pollutants. Transportation, dispersion, and transformation of pollutants in the atmosphere. Measurement and control of air pollution.

**ENV E 558. Solid and Hazardous Waste Engineering (3)**

Prerequisites: 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.

**ENV E 596. Advanced Environmental Engineering Topics (1-3)**

Prerequisites: Minimum grade point average of 3.0 and consent of instructor.

Modern developments in environmental engineering. May be repeated with new content. 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.



**GRADUATE COURSES**

**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.

**ENV E 645. Aquatic Chemistry for Environmental Engineers (3)**

Prerequisites: Graduate standing.  
Chemistry of natural and polluted water. Process chemistry for water and wastewater treatment.

**ENV E 646. Microbiological Principles of Environmental Engineering (3)**

Prerequisites: Graduate standing.  
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).

**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.

**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.

**ENV E 696. Advanced Topics in Environmental Engineering (2-3)**

Intensive study in specific areas of environmental engineering. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**ENV E 797. Independent Research (1-3) Cr/NC/RP**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

**For additional courses in environmental engineering, refer to "Civil Engineering" in this section of the bulletin.**

**European Studies (EUROP)**

*In the College of Arts and Letters*

**UPPER DIVISION COURSES**

**EUROP 501. European Life and Culture (3)**

Prerequisites: European Studies 301.  
Specialized study of topics such as European union, European women, or European art. May be repeated with new title and content. See *Class Schedule* for specific content. Maximum credit six units.

**EUROP 527. The Holocaust in Feature Films (3)  
(Same course as History 527)**

Two lectures and two hours of activity.  
Prerequisites: 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.

**EUROP 560. Technologies and Methodologies: Language Learning and Teaching (3)**

Two lectures and two hours of activity.  
Prerequisites: Advanced level foreign language competency.  
Understanding foreign language competencies; create and use technology-assisted learning and testing materials; review and evaluate foreign theories and methodologies.

**EUROP 596. Topics in European Studies (3)**

Prerequisites: European Studies 301 for majors and minors; upper division standing for all others.  
Specialized topics in contemporary European culture. May be repeated with new content. 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**Exercise and Nutritional Sciences (ENS)**

*In the College of Professional Studies and Fine Arts*

**UPPER DIVISION COURSES**

**ENS 500. Seminar in Neurophysiological and Mechanical Bases of Therapeutic Exercise (3)**

Prerequisites: Exercise and Nutritional Sciences 462, 463, 463L.  
Mechanical and neurophysiological framework for therapeutic exercise interventions. Applications to clinical practice.

**ENS 596. Selected Topics in Exercise and Nutritional Sciences (1-3)**

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 degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### GRADUATE COURSES

#### **ENS 601. Experimental Methods in Exercise and Nutritional Sciences (3)**

Prerequisites: Undergraduate statistics course.  
Experimental methods in exercise and nutritional science.

#### **ENS 602. Research Evaluation in Exercise and Nutritional Sciences (3)**

Prerequisites: 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 603. Measurement and Evaluation in Exercise and Rehabilitation (3)**

Prerequisites: Exercise and Nutritional Sciences 305 and Statistics 119.

Measurement theory and practice as applied to exercise and rehabilitation. Interpretation of measures used in physical medicine and rehabilitation contexts.

#### **ENS 610. Biomechanics: Measurement Techniques I-Kinematics (3)**

Prerequisites: Exercise and Nutritional Sciences 306 and 603.  
Kinematic analysis of human movement using videography, electrogoniometry, and accelerometry with automated data reduction techniques typically used in study of pathomechanics. (Formerly numbered Exercise and Nutritional Sciences 630.)

#### **ENS 611. Biomechanics: Measurement Techniques II-Kinetics (3)**

Prerequisites: Exercise and Nutritional Sciences 306 and 603.  
Kinetic analysis of human movement using clinical tools and laboratory devices to measure loads and forces applied to body under typical and pathological conditions. (Formerly numbered Exercise and Nutritional Sciences 631.)

#### **ENS 612. Biomechanics: Measurement Techniques III-EMG (3)**

Prerequisites: Exercise and Nutritional Sciences 303, 306, 603.  
Tissue structure, neurological function, and muscular performance of typical and pathological human movement. (Formerly numbered Exercise and Nutritional Sciences 660.)

#### **ENS 613. Motor Control and Rehabilitation Science (3)**

Prerequisites: Exercise and Nutritional Sciences 307 and 603.  
Human movement in clinical and non-clinical populations using principles of motor control. (Formerly numbered Exercise and Nutritional Sciences 673.)

#### **ENS 632. Physiological Chemistry of Exercise (3)**

Prerequisites: 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 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 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.  
Prerequisites: 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 671. Seminar in Advanced Sport and Exercise Psychology (3)**

Prerequisites: Exercise and Nutritional Sciences 461.  
Research and theory of psychological behavior in sport and physical activity. Theoretical models, research issues, and applications.

#### **ENS 684. Behavior Change in Sport and Exercise (3)**

Prerequisites: 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 687. Exercise Psychology: From Theory to Practice (3)**

Prerequisites: Graduate standing in kinesiology or related field. Exercise and Nutritional Sciences 461 and credit or concurrent registration in Exercise and Nutritional Sciences 671.  
Psychological concepts, principles and theories for understanding determinants and consequences of exercise and physical activity. Emphasis on application concepts in exercise settings. Evaluation of interventions to increase physical activity in different settings.

#### **ENS 689. Applied Psychology for Superior Performance (3)**

Prerequisites: Exercise and Nutritional Sciences 671.  
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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

#### **ENS 790. Seminar in Directed Readings (3) Cr/NC**

Prerequisites: Exercise and Nutritional Sciences 602 and advancement to candidacy.  
Preparation for comprehensive examination for students pursuing either an M.A. or an M.S. degree under Plan B.

#### **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 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.

#### **ENS 798. Special Study (1-3) Cr/NC/CP**

Prerequisites: 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**

Prerequisites: 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.

**ENS 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisites: 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. Registration in 799C limited to two semesters.

**Finance (FIN)**

*In the College of Business Administration*

**UPPER DIVISION COURSES****FIN 522. Individual Insurance Management (3)**

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)**

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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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 659. Decision Making in the World Economy (3)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**FIN 705. Seminar in Estate Planning (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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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## French (FRENC)

*In the Department of European Studies*

*In the College of Arts and Letters*

**NOTE: All upper division courses in French are taught in French unless otherwise stated.**

**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)**

Prerequisites: 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)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### GRADUATE COURSES

#### **FRENC 621. Critical Methods (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

#### **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)**

Prerequisites: 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)**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

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## Geography (GEOG)

*In the College of Arts and Letters*

### 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Geography 103.

The causes of climatic types as they occur throughout the world. Principles of several climatic classifications.

**GEOG 511. Hydrology and Global Environmental Change (3)**

Prerequisites: Geography 101 or 103.

Hydrologic processes and regimes, how these are affected by environmental change and how hydrologic process and regimes affect patterns of environmental change. Processes operating at global, regional, and local scales are examined, including land-use/land-cover change and climate change.

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

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Geography 370.

Management of environmental and natural resources. Effective programs and the institutional frameworks in which they occur.

**GEOG 572. Land Use Analysis (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Geography 101 or 102.

Importance of location and environment in the use, management, and quality of recreation areas. Field trips are required.

**GEOG 581. Cartographic Design (3)**

Two lectures and three hours of laboratory.

Prerequisites: 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.

Prerequisites: 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.

Prerequisites: Geography 484 or 587.

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)**

Prerequisites: 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)**

Prerequisites: 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 587. Remote Sensing of Environment (4)**

Three lectures and three hours of laboratory.

Prerequisites: Geography 101. Recommended: Physics 180A-180B.

Techniques for acquiring and interpreting remotely sensed data of environment. Electromagnetic radiation processes, aerial photographic systems, and human interpretation of aerial and satellite imagery. Geographic analysis of selected terrestrial, oceanographic, and atmospheric processes and resources. (Formerly numbered Geography 488.)

**GEOG 588. Intermediate Remote Sensing of Environment (4)**

Three lectures and three hours of laboratory.

Prerequisites: Geography 385 and 587.

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 589. GIS-Based Decision Support Methods (3)**

Prerequisites: Geography 484.

Integration of Geographic Information Systems (GIS) with decision support techniques for problem-solving and decision-making. Public participation and collaborative use of GIS for location-based planning and resource management.

**GEOG 595. Geographic Internship (3)**

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)**

Prerequisites: Six upper division units in geography.  
Advanced special topics in geography. May be repeated with new content. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES****GEOG 670. Environmental and Resource Conservation Theory (3)**

Prerequisites: Graduate standing.  
Theories and principles involved in natural and environmental resources management.

**GEOG 683. Advanced Geographic Information Systems (3)**

Prerequisites: Geography 484 and Computer Science 108.  
Modeling of spatial phenomena in geographic information systems with geoprocessing techniques.

**GEOG 683L. Geographic Information Systems Laboratory (1-2)**

Three to six hours of laboratory.  
Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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 (1-2)**

Two or four hours of laboratory.  
Prerequisites: 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)**

Prerequisites: Consent of instructor.  
Advanced special topics in geography. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GEOG 700. Seminar in Geographic Research Design (3)**

Prerequisites: 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)**

Prerequisites: Graduate standing.  
Evolution of concepts concerning the nature, scope, theories, and methodologies of geography.

**GEOG 710. Seminar in Physical Geography (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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) Cr/NC**

Prerequisites: 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**

Prerequisites: 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 (GEOL)

In the College of Sciences

### UPPER DIVISION COURSES

#### GEOL 502. Geology of North America (3)

Prerequisites: Geological Sciences 205.

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)

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 200.

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)

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.

Prerequisites: 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.

Prerequisites: 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)

Prerequisite: Geological Sciences 306.

Geologic relations, origin, distribution, and economics of metallic and nonmetallic mineral deposits.

#### GEOL 521. Petroleum Geology (3)

Prerequisites: 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 530. Geochemistry (3)

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 324; 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 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)

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 205 (not required but recommended for Emphases in Geochemistry and Geophysics) and 324.

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)

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 205 and either Biology 100-100L, 101-101L or 201A, 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 205, and either Geological Sciences 324, 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.

Prerequisites: 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)

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 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 580. Seismic Interpretation and 3D Visualization (3)

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 306.

Computer-based seismic interpretation, mapping, and modeling in both 2D and 3D. Overview of basic seismic processing. Emphasis on industrial applications, both petroleum and shallow geotechnical. (Formerly numbered Geological Sciences 647.)

#### GEOL 596. Advanced Topics in Geology (1-4)

Prerequisites: Consent of instructor.

Advanced special topics in the geological sciences. May be repeated with new content. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### GRADUATE COURSES

#### GEOL 600. Seminar (1-3)

Refer to *Class Schedule* for lecture/laboratory format.

Prerequisites: 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 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 620. Seminar: Paleoenvironmental Reconstruction (3)**

Prerequisites: Geological Sciences 537 or Biology 517 or 645.

Methods used to reconstruct past environmental conditions and their integration to provide frameworks for related research in climate, ecology, biology, and evolution. Case studies range in time from the pre-human impact to the Mesozoic.

### **GEOL 625. Paleoecology (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)**

Prerequisites: 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 631. Simulation of Wave Propagation in Complex Media (3)**

Prerequisites: Mathematics 342B or similar level of power series, partial differential equations.

Symbolic operators, accuracy, consistency, and stability for finite difference equations, boundary conditions (free surface/periodic/absorbing) and seismic sources (earthquake/explosive). 1D, 2D, and 3D approximations to the wave equation will be derived.

### **GEOL 632. Geophysical Inverse Theory (3)**

Prerequisites: Mathematics 342A or similar level of matrix/linear algebra.

Linear (SVD and gradient methods) and nonlinear (random and guided search) methods for inversion, including solution appraisal. Inversion methods applied to geophysical problems. Introduction to Matlab/Unix/Fortran.

### **GEOL 633. Quaternary Geology (3)**

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 514.

Quaternary climate, geochronometric dating and soil stratigraphy.

### **GEOL 634. Geoelectromagnetics (3)**

Prerequisite: Geological Sciences 533. Recommended: Electrical Engineering 340 or Physics 400A-400B.

Controlled-source electromagnetics, magnetotellurics, and ground-penetrating radar to near-surface environmental, engineering, and buried metal (pipes and military ordnance) problems; extension to deeper targets found in groundwater, mining, energy exploration, and geodynamics.

### **GEOL 635. Petrology of Terrigenous Rocks (3)**

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 536.

Thin-section and hand-specimen description and classification of sandstones, conglomerates, and mudrocks. Emphasis on mineralogy, provenance, diagenesis, and paleogeographic reconstructions.

### **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 645. Advanced Structural Geology (3)**

Prerequisites: Geological Sciences 306.

Topics in advanced structural geology in the light of petrographic, geophysical, and experimental data, combined with classic field observations.

### **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.

Prerequisites: 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.

Prerequisites: 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)**

Prerequisites: Geological Sciences 530.

Fundamental principles of isotope geochemistry and geochronology. Use of stable and radiogenic isotopic systems to study the earth. Instrumental methods of isotopic analysis.

### **GEOL 676. Solute Transport in Groundwater (3)**

Prerequisites: 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, 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 687. Volcanology (3)**

Prerequisites: Geological Sciences 324.

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.

Prerequisites: 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 690. Earthquake Physics I (3)**

Prerequisite: Geological Sciences 560. Recommended: Mathematics 342B.

Structure and tectology of fault zones as inferred from geological and geophysical observations. Stress state and frictional behavior of faults, stress interaction models, thermal, and hydrological properties of fault zones. Mechanics and energy budget of earthquakes.



**GEOL 691. Earthquake Physics II (3)**

Prerequisites: Geological Sciences 560 and 690. Recommended: Mathematics 342B.

Theoretical and numerical models of earthquake rupture and wave propagation, with applications to ground motion prediction and seismic hazard estimation. Collective behavior of fault networks, seismicity models, earthquake predictability; application to earthquake forecast models.

**GEOL 750. Research and Technical Writing (3) Cr/NC**

Prerequisite: Advancement to candidacy.

Research and technical report writing in geological sciences for students in Plan B.

**GEOL 797. Research (1-3) Cr/NC/RP**

Prerequisites: 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**

Prerequisites: 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.

**GEOL 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisites: 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. Registration in 799C limited to two semesters.

**German (GERMN)**

*In the Department of European Studies  
In the College of Arts and Letters*

**UPPER DIVISION COURSES**

**NOTE: All upper division courses in German are taught in German unless otherwise stated.**

**GERMN 501. Translation (3)**

Prerequisites: German 300 and 301.

Translation of a variety of texts from German to English and English to German.

**GERMN 520. Modern German Literature (3)**

Prerequisites: German 300 and 301.

Major authors and genres since Enlightenment.

**GERMN 575. Seminar in German Studies (3)**

Prerequisites: Two upper division German courses.

Directed research on topics in German studies. See *Class Schedule* for specific content. May be repeated with new title and content. Maximum credit six units.

**GERMN 596. Topics in German Studies (3)**

Prerequisites: German 300 and 301. **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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES**

**GERMN 696. Topics in German Studies (1-3)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**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.

**Gerontology (GERO)**

*In the College of Health and Human Services*

**UPPER DIVISION COURSES**

**GERO 520. Analysis of Programs for the Aging (3)**

Prerequisites: 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)**

Prerequisites: 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 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 degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES**

**GERO 601. Theory in Gerontology (3)**

Prerequisites: 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)**

Prerequisites: 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 605. Long-Term Care (3)**

Prerequisites: 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 630. 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. (Formerly numbered Gerontology 530.)

### **GERO 696. Contemporary Topics in Gerontology and Geriatrics Seminar (3)**

Prerequisites: 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. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### **GERO 700A-700B. Practicum (3-3) Cr/NC**

Prerequisites: Gerontology 601 and 630.

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. (Formerly numbered Gerontology 700.)

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

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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.

### **GERO 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisites: 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. Registration in 799C limited to two semesters.

### **HIST 516. Imperialism and the Colonial Experience (3)**

Prerequisites: Upper division standing.

Imperialism and colonialism as these transformed both colonizing and colonized peoples, e.g., modernization, racism, Orientalism, multi-ethnic, Great Power competition, anti-colonial resistance, and nationalism.

### **HIST 527. The Holocaust in Feature Films (3) (Same course as European Studies 527)**

Two lectures and two hours of activity.

Prerequisites: 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 548. Race and Ethnicity in United States History (3)**

Prerequisites: Upper division standing.

Race and ethnicity in America from colonial period through twentieth century to include historical construction of identity; colonization, slavery, state formation; labor, immigration, politics of whiteness; applicability of black/white binary of a multi-ethnic society.

### **HIST 580. Topics in the History of War and Violence (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Upper division standing.

Variable topics in 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)**

Prerequisites: 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)**

Prerequisites: 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. May be repeated with new content. 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

#### **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.

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## History (HIST)

*In the College of Arts and Letters*

### **Field (a) Thematic, Comparative, and Interdisciplinary History**

#### **UPPER DIVISION COURSES**

### **HIST 500. Topics in Ancient History (3)**

Prerequisites: 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 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.

**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.

**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 513. Early Scandinavia (3)**

The formation and development of the Scandinavian kingdoms from the Viking Age to the end of the Napoleonic Wars. (Formerly numbered History 513A.)

**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 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)**

Prerequisites: 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.

**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.

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

China's institutional and cultural development from ancient to premodern times. Emphasis on traditional philosophy, religions, literature, and the arts.

**Field (c). The Modern World  
UPPER DIVISION COURSES**

**HIST 509. British Century: Waterloo to World War I (3)**

Prerequisites: Upper division standing.

History of England, 1815-1914, to include industrial supremacy; struggles over urban problems, reform, democratization, labor organization, national self-image; interplay of liberalism and collectivism; sources of social stability and instability; women's rights; jingoism; coming of World War I.

**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 515. Globalization in Historical Perspective: 1500 to the Present (3)**

Prerequisites: Upper division standing.

Global movements of people, goods, and capital since 1500. Historical trends in labor and productivity, relationship of policy to economic growth, convergence and divergence, and impact of economic globalization on human welfare and the environment.

**HIST 517. Modern Germany (3)**

Political, social, and economic development of Germany from 1848 to present.

**HIST 518. Russia and the Soviet Union (3)**

Political, social, and economic development of Russia in Europe and Asia. (Formerly numbered History 518B.)

**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)**

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. Vietnam Wars (3)**

Prerequisites: Upper division standing and six units in history.

US involvement in Vietnam. History of Vietnamese state, French colonial rule, Japanese occupation, origins of Vietnamese revolution and US intervention, conduct of US conventional and covert military operations, role of women, and legacy of the war.

**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.

**HIST 551. Modern Mexico (3)**

Prerequisites: 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.

**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.

### **HIST 567. China in Revolution (3)**

China's history during the tumultuous nineteenth and twentieth centuries. China's forced encounter with Western imperialism, rural, and urban social movements. Impact of Mao's Revolution on everyday life in China, successes, limitations of China's recent reform policies.

### **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)**

Prerequisites: 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**

**NOTE: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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, 650, or 680, three units of which may be taken concurrently; six additional units in history appropriate to student's program; consent of instructor.

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)**

Prerequisites: 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)**

Prerequisites: Consent of instructor.

Intensive study in specific areas of history. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### **HIST 795. Area Studies in History (1-3) Cr/NC**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

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## Homeland Security (H SEC)

*In the College of Sciences*

## **GRADUATE COURSES**

### **H SEC 601. Seminar in Homeland Security (3)**

Prerequisites: Classified graduate standing.

Domestic, national security, and foreign policies as they relate to prevention, deterrence, preemption, defense against, and response to terrorist attacks and other man-made and natural critical incidents and emergencies on local, regional, national, and international levels.

### **H SEC 602. Seminar in Science, Technology, and Homeland Security (3)**

Prerequisites: Classified graduate standing.

Interrelationship of technology and science to homeland security policy. Use of technology and science for decision-making and collaboration. Ethical issues associated with application of technology and science to security.

**H SEC 603. Seminar in Emergency Preparedness and Response (3)**

Prerequisites: Classified graduate standing.

Practices of emergency management and response in civilian and military settings. Historical development of management of and response to emergencies and critical incidents. Interrelationship of public, private, and non-profit sectors on local, regional, national, and international levels.

**H SEC 604. Seminar in Law, Society, and Homeland Security (3)**

Prerequisites: Classified graduate standing.

Role and function of law related to homeland security on domestic and international levels. Historical development of ideas and rules of homeland security-related law and their relation to domestic and international legal, social, and political structures. Interrelationship of security, human, and civil rights.

**H SEC 620. Seminar in Warfare and Homeland Security (3)**

Prerequisites: Classified graduate standing.

Principles, rules, and laws of warfare. Offensive and defensive tactics and strategies related to homeland security. Relationship of warfare to grand strategy. Asymmetrical warfare tactics and strategies and their use to exploit power constraints inherent to democracies and their institutions. Changing nature of battlefields in contemporary warfare.

**H SEC 621. Seminar in Intelligence and Homeland Security (3)**

Prerequisites: Classified graduate standing.

Role and function of intelligence as it relates to homeland security. Theories and historical evolution of intelligence. Intelligence in domestic and international contexts. Collection, analysis, and production of intelligence, counterintelligence, and covert actions. Management of intelligence. Legal and ethical issues associated with intelligence.

**H SEC 650. Homeland Security Study Abroad (3 or 6)**

Prerequisites: Classified graduate standing.

Selected topics in homeland security taught abroad. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

**H SEC 695. Practicum in Homeland Security (3)**

Prerequisites: Classified graduate standing.

Practical exercises related to homeland security. Cooperative exercises with first responders, homeland security officials, and/or non-governmental organizations on local, regional, national, and/or international level. Maximum credit three units applicable to a master's degree.

**H SEC 696. Special Topics in Homeland Security (1-3)**

Prerequisites: Classified graduate standing.

Study in specific areas of homeland security. May be repeated with new content with the approval of graduate adviser. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**H SEC 790. Directed Readings in Homeland Security (3) Cr/NC**

Prerequisites: Advancement to candidacy.

Preparation for the comprehensive examination.

**H SEC 797. Research (1-3) Cr/NC**

Prerequisites: Classified graduate standing.

Supervised research in an area of homeland security. Maximum credit six units applicable to a master's degree.

**H SEC 798. Special Study (1-3) Cr/NC**

Prerequisites: Classified graduate standing.

Individual study, generally for thesis research. Maximum credit six units applicable to a master's degree (six units of combined 797 or 798 applicable to a master's degree).

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

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

Preparation of a thesis for the master's degree.

**H SEC 799B. Thesis or Project (0) Cr/NC**

Prerequisites: Prior registration in Thesis or Project 799A and 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 student must be registered in the course when the completed thesis is granted final approval.

**H SEC 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisites: Completion of degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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## **Hospitality and Tourism Management (HTM)**

*In the College of Professional Studies and Fine Arts*

**UPPER DIVISION COURSE**

**HTM 596. Selected Topics in Hospitality and Tourism Management (1-3)**

Prerequisite: Upper division status or graduate standing.

Selected topics in hospitality, tourism, and/or tribal gaming management. 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

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## **Humanities (HUM)**

*In the Department of Classics and Humanities*

*In the College of Arts and Letters*

**UPPER DIVISION COURSES**

**HUM 596. Topics in Humanities (1-3)**

Prerequisites: Upper division standing and consent of instructor.

Interdisciplinary topics in literature and the arts. May be repeated with new content. 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 a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**HUM 599. Special Study (1-3)**

Prerequisites: Consent of major or graduate adviser; to be arranged by department chair and instructor.

Directed individual study. Maximum credit six units.

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## **Information and Decision Systems (IDS)**

*In the College of Business Administration*

**UPPER DIVISION COURSES**

**IDS 515. Intermediate Programming for Business Applications (3)**

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

Intermediate programming for business applications with Java, C#, or similar languages. Data structures, control structures, and program structures. Use of object-oriented features, classes, subclasses, and inheritance for modeling and processing of business information.

### **IDS 520. Advanced Programming for Business Applications (3)**

Prerequisite: Information and Decision Systems 515.

Advanced object-oriented features using Java (abstract classes, polymorphism, interfaces, generic classes) for business application programs using graphical user interfaces. Use of multithreading for business simulation. Enhancement of business applications with multimedia 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Classified graduate standing.

Computer architecture, programming languages, programming systems, and operating systems.

### **IDS 686. Database Management Systems (3)**

Prerequisites: Classified graduate standing.

Applications of database management systems in business. Design and administration of database processing systems applications.

### **IDS 687. Data Communications and Distributed Data Processing (3)**

Prerequisites: Classified graduate standing.

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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Classified graduate standing.

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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### **IDS 697. Information Systems Development II (3)**

Prerequisites: 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)**

Prerequisites: Classified graduate standing.

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

### **IDS 744. Seminar in Lean Six Sigma Quality Management (3)**

Prerequisites: Business Administration 662.

Applications of lean principles and Six Sigma methodology for business quality and agility. Advanced concepts, methods, lean tools, and statistical quality tools for process improvement.

### **IDS 748. Seminar in Advanced Data Analysis (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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 752. Seminar in Supply Chain Planning and Control (3)**

Prerequisites: Business Administration 662.

Methodology and theory to plan and control operations and supply chain. Topics include bill of materials, sales and operations planning, master scheduling, materials requirement planning and scheduling, capacity planning, product design, and process selection.

### **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 Strategy (3)**

Prerequisites: 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 755. Information Systems Security Management (3)**

Prerequisites: Classified graduate standing.

Information systems management. Focus on creation of a security plan for an organization to include risk analysis, security issues, security design, security plan, disaster recovery/business continuity, and threat analysis.

### **IDS 790. Directed Readings in Information and Decision Systems (3) Cr/NC**

Prerequisites: Advancement to candidacy.

Preparation for the comprehensive examination for students.

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

Prerequisites: 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**

Prerequisites: 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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**Interdisciplinary Studies (INT S)**

*Division of Graduate Affairs*

**GRADUATE COURSES**

**INT S 690. Seminar in Research Ethics (1) Cr/NC**

Prerequisites: Admission to graduate study.  
Core content areas that influence responsible conduct of research including research misconduct, data management, use of animal and human subjects, conflict of interest and commitment, authorship, publication and peer review, and collaboration and mentoring. Intended for graduate students involved in research projects.

**INT S 695. Seminar in Responsible Conduct of Research (3)**

Prerequisites: Graduate standing.  
Practices central to scientific integrity and responsible conduct of research beyond simple compliance with rules and regulations. Emphasis on ethical practices of science and research across disciplines.

**INT S 797. Research (1-3) Cr/NC/RP**

Prerequisites: Advancement to candidacy and completion of Special Study Request Form.  
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**

Prerequisites: Completion of Special Study Request Form.  
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**

Prerequisites: 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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**International Business (I B)**

*In the College of Arts and Letters and  
the College of Business Administration*

**UPPER DIVISION COURSE**

**I B 596. Topics in International Business (1-3)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

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**International Security and  
Conflict Resolution (ISCOR)**

*In the College of Arts and Letters,  
the College of Professional Studies and Fine Arts, and  
the College of Sciences*

**UPPER DIVISION COURSE**

**ISCOR 575. Homeland Security (3)**

Prerequisites: Upper division or graduate standing.  
Evaluates components of homeland security. Research and analysis of homeland security policies and laws. Comparisons between homeland security policies and laws of various nations. Links between conflict abroad and homeland security in the United States. (Formerly numbered International Security and Conflict Resolution 475.)

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**Journalism and Media Studies (JMS)**

*In the College of Professional Studies and Fine Arts*

**UPPER DIVISION COURSES**

**JMS 505. Government and Telecommunications (3)**

Prerequisites: Admission to a major or minor in the School of Journalism and Media Studies. **Proof of completion of prerequisites required:** Copy of transcript.

Responsibilities of telecommunication organizations as prescribed by law, government policies and regulations, and significant court decisions. (Formerly numbered Communication 505.)

**JMS 506. Advertising and Society (3)**

Prerequisites: Admission to a major or minor in the School of Journalism and Media Studies. **Proof of completion of prerequisites required:** Copy of transcript.

Theoretical and philosophical analysis of advertising in modern society. (Formerly numbered Communication 506.)

**JMS 529. Investigative Reporting (3)**

One lecture and four hours of activity.  
Prerequisites: Journalism and Media Studies 300, 310W with grades of C (2.0) or better in each course. **Proof of completion of prerequisites required:** Copy of transcript.

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. (Formerly numbered Journalism 529.)

**JMS 550. Multimedia News Laboratory (3)**

One lecture and four hours of activity.  
Prerequisites: Journalism and Media Studies 300, 310W, 420 and three units selected from Journalism and Media Studies 315, 430, 445 with grades of C (2.0) or better in each course. **Proof of completion of prerequisites required:** Copy of transcript.

Capstone course using skills and knowledge acquired in critical thinking, writing, reporting, editing, production, and design courses. Teams prepare multimedia news content. Field and laboratory experience. (Formerly numbered Journalism 550.)

**JMS 560. Advertising Research (3)**

Prerequisites: Journalism and Media Studies 310W and 460 with grades of C (2.0) or better in each course. Admission to advertising majors and minors, Major Code: 06041. **Proof of completion of prerequisites required:** Copy of transcript.

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. (Formerly numbered Communication 560.)

**JMS 565. Advertising Campaigns (3)**

Prerequisites: Journalism and Media Studies 461 and 560 with grades of C (2.0) or better in each course.

Planning and creation of advertising campaigns including situation analysis and strategy, advertising and marketing objectives, consumer analysis and target audience selection, creative development, media strategy and tactics, sales promotion, and campaign evaluation. (Formerly numbered Communication 565.)

**JMS 574. International Advertising (3)**

Prerequisites: Admission to a major or minor in the School of Journalism and Media Studies.

Comparative cultural, economic, legal, political, and social conditions relevant to international advertising. (Formerly numbered Communication 574.)

**JMS 581. Public Relations Research (3)**

Two lectures and two hours of activity.

Prerequisites: Journalism and Media Studies 310W and 480 with grades of C (2.0) or better in each course. Admission to public relations majors and minors, Major Code: 05992. **Proof of completion of prerequisites required:** Copy of transcript.

Qualitative and quantitative methods used in evaluation research to plan, track, and evaluate public relations programs. Computerized statistical analysis. (Formerly numbered Communication 581.)

**JMS 585. Professional Practices in Public Relations (3)**

Prerequisites: Journalism and Media Studies 481 and 581 with grades of C (2.0) or better in each course.

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. (Formerly numbered Communication 585.)

**JMS 589. Ethical Issues in Mediated Communication (3)**

Prerequisites: Upper division standing or graduate standing. Admission to a major or minor for undergraduates in the School of Journalism and Media Studies. **Proof of completion of prerequisites required:** Copy of transcript.

Ethical challenges faced by journalists, public relations and advertising professionals, and other communication specialists. Classical and modern ethical concepts and issues as they apply to mediated communication, as well as codes of ethics. (Formerly numbered Communication 589.)

**JMS 591. International Telecommunications (3)**

Prerequisites: Admission to a major or minor in the School of Journalism and Media Studies. **Proof of completion of prerequisite required:** Copy of transcript.

Comparative study of economic, social, political determinants of broadcasting, and telecommunication systems around the world. (Formerly numbered Communication 591.)

**JMS 595. Seminar in Theoretical Approaches to Public Relations (3)**

Prerequisites: Journalism and Media Studies 585 with grade of C (2.0) or better.

Diverse theoretical approaches to public relations, including management, rhetorical, critical, relational and marketing approaches. Preparation for independent scholarly research project or master's thesis.

**JMS 596. Selected Topics (1-3)**

Prerequisites: Senior standing or above.

Specialized study in selected topics. May be repeated with new content. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES**

**JMS 600A. Seminar: Introduction to Graduate Studies in Mass Communication and Media Studies (3)**

Prerequisites: Classified or conditionally classified graduate standing in the School of Journalism and Media Studies.

Contemporary and emergent mass 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. (Formerly numbered Communication 600A.)

**JMS 600B. Seminar: Research Methods in Mass Communication and Media Studies (3)**

Prerequisites: Classified or conditionally classified graduate standing in the School of Journalism and Media Studies.

Methods and tools of inquiry in mass communication research. Survey, experimental, content analysis, legal, and historical research methods. Required for first semester of graduate work; prerequisite for advancement to candidacy. May not be repeated more than once. (Formerly numbered Communication 600B.)

**JMS 602. Seminar: Military Public Affairs (3)**

Prerequisites: Admission to M.A. program in the School of Journalism and Media Studies and consent of instructor.

Public relations applied to military public affairs. Public relations theory, history, ethics, social responsibility, management, law and technology. Current problems and issues in military public affairs.

**JMS 603. Seminar: Professional Development in Military Public Affairs (3)**

Prerequisites: Admission to M.A. program in the School of Journalism and Media Studies and consent of instructor.

Development of professional expertise in preparing research findings for external review, using methods that include statistical data analysis. Prepare for professional examination in public relations.

**JMS 620. Seminar: Quantitative Methods in Media Research (3)**

Prerequisites: Journalism and Media Studies 600A and 600B or Communication 601.

Research, design, computer statistical analysis, and reporting of survey, content analysis, and experimental studies in media contexts.

**JMS 696. Special Topics (1-3)**

Prerequisites: Journalism and Media Studies 600A and 600B.

Intensive study in specific areas of journalism and media studies. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**JMS 701. Seminar: Mass Communication Problems (3)**

Prerequisites: Journalism and Media Studies 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. (Formerly numbered Communication 701.)

**JMS 708. Seminar: Mass Communication and Society (3)**

Prerequisites: Journalism and Media Studies 600A and 600B.

Rights, responsibilities, and characteristics of mass media and mass communication practitioners. Characteristics and responsibilities of audiences and society. (Formerly numbered Communication 708.)

**JMS 750. Seminar: History of Media and Communication Study (3)**

Prerequisites: Journalism and Media Studies 600A and 600B.

History of key concepts and figures in media and communication studies.

**JMS 764. Seminar: Telecommunication Technology and Policy (3)**

Prerequisites: Journalism and Media Studies 600A and 600B.

Contemporary trends in telecommunication and information technology, implications of trends for public policy and affected businesses. Interaction between technology, implications of trends for public policy and affected businesses. Interaction between technology and regulation. (Formerly numbered Communication 764.)



**JMS 775. Seminar: Mediated Communication in International Settings (3)**

Prerequisites: Journalism and Media Studies 600A and 600B.  
Cultural differences and role culture plays in construction and interpretation of mediated communication in international contexts.

**JMS 780. Seminar: Public Relations Research (3)**

Prerequisites: Journalism and Media Studies 600A and 600B.  
Analysis and critique of contemporary public relations programs and theory. Development of a comprehensive public relations project involving original research. (Formerly numbered Communication 780.)

**JMS 785. Seminar: Advertising Research (3)**

Prerequisites: Journalism and Media Studies 600A and 600B.  
Advanced topics in theory, design, and utilization of advertising research. (Formerly numbered Communication 785.)

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

Prerequisites: Journalism and Media Studies 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.

**JMS 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.

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

Prerequisites: 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.

**JMS 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisites: 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. Registration in 799C limited to two semesters.

**Latin American Studies (LATAM)**

*In the College of Arts and Letters*

**UPPER DIVISION COURSES**

**LATAM 510. Latin America Research Through Primary Sources (3)**

Prerequisite: Graduate standing or 12 units of upper division coursework on Latin America.  
Primary sources, both textual and material to interpret the past. Skills to conduct research in an archive, library, museum, or private collection in Latin America. How to incorporate primary sources into a major research project.

**LATAM 540. History, Society, and Ecology of Baja Peninsula (3)**

Prerequisites: Latin American Studies 101; Geography 102; Anthropology 102 or Political Science 103.  
Historical and social anthropology of Baja Peninsula, current issues in socio-economy of a small region, relations between human activity and natural environment, flora and fauna of region, and challenges to ecological preservation.

**LATAM 550. Mexican-US Border from a Latin American Perspective (3)**

Prerequisites: Six upper division units with Latin American content. Spanish proficiency.  
Multidisciplinary analysis of Mexican-US border region.

**LATAM 555. Women's Rights and Citizenship in Latin America (3)**

Prerequisites: Latin American Studies 101; Political Science 103 or Women's Studies 101.  
Women's roles in war, counter-insurgency and human rights movements of 1970s and 1980s; women and social movements; female citizenship and socio-political participation in Latin American countries.

**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 580. Special Topics (1-4)**

Prerequisites: 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 520. Ethnographic Field Methods (3)
- ANTH 582. Regional Anthropology (3)\*
- ANTH 583. Topical Anthropology (3)\*

**Art Courses (ART)**

- ART 561. Art of Pre-Hispanic America (3)
- ART 562. Art of Latin America (3)
- ART 596. Advanced Studies in Art and Art History (1-4)\*

**Communication Course (COMM)**

- COMM 596. Selected Topics (1-4)\*

**Comparative Literature Courses (C LT)**

- 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)\*

**Geography Courses (GEOG)**

- GEOG 507. Geography of Natural Vegetation (3)
- GEOG 509. Regional Climatology (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)\*

**Journalism and Media Studies Course (JMS)**

- JMS 591. International Telecommunications (3)

**Law**

With the permission of the graduate adviser and the approval of the Division of Graduate Affairs, 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 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 577. Principles of International Law (3)

**Portuguese Course (PORT)**

- PORT 535. Brazilian Literature (3)

**Sociology Courses (SOC)**

- SOC 522. The Family in Comparative and Cross-Cultural Perspectives (3)
- SOC 555. Immigrants and Refugees in Contemporary American Society (3)
- SOC 596. Current Topics in Sociology (1-3)\*

**Spanish Courses (SPAN)**

- SPAN 502. Genre Studies in Spanish American Literature (3)
- SPAN 515. Mexican Literature (3)
- SPAN 520. Caribbean Area Countries Literature (3)
- SPAN 549. Spanish Phonetics and Phonology (3)
- SPAN 581. Mexican Sociolinguistics (3)
- SPAN 596. Selected Studies in Spanish (3)\*

**Women's Studies Courses (WMNST)**

- WMNST 512. Latinas in the Americas (3)
- WMNST 515. Women: Myth, Ritual, and the Sacred (3)
- WMNST 553. Women and the Creative Arts (3)\*
- WMNST 565. Women: Health, Healing, and Medicine (3)
- WMNST 580. Women, Development, and the Global Economy (3)
- WMNST 596. Topics in Women's Studies (3)\*

\*Acceptable when of relevant content.

**GRADUATE COURSES**

**LATAM 600. Seminar in Latin American Studies (3)**

Prerequisite: Graduate standing.

Core seminar in Latin American studies. Historical, conceptual, and methodological survey of Latin American studies from first European conquests in western hemisphere to end of twentieth century.

**LATAM 601. Seminar on Methodology of Latin American Studies (3)**

Prerequisites: Graduate standing.

Theories and methodologies of Latin American Studies.

**LATAM 696. Experimental Topics (3)**

Prerequisites: Graduate standing.

Intensive study in specific areas of Latin American studies. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**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 795. Latin American Studies Internship (3) Cr/NC**

Prerequisites: Latin American Studies 601 and consent of instructor.

A 160-hour internship approved by instructor in public and private agency.

**LATAM 797. Research (1-3) Cr/NC/RP**

Prerequisites: Consent of graduate adviser.

Research in one of the fields of Latin American studies. Maximum credit six units applicable to a master's degree.

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

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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 602. Seminar in Archaeology (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

**Art Courses (ART)**

- ART 760. Seminar in Twentieth Century Art (3)
- ART 798. Special Study (1-3) Cr/NC/RP

**City Planning Course (C P)**

- C P 670. History of Urban Planning (3)

**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 750. Seminar in History of Economic Thought (3)\*
- ECON 797. Research (3) Cr/NC/RP
- ECON 798. Special Study (1-3) Cr/NC/RP

**English Courses (ENGL)**

- ENGL 601. Literary Study in a Multicultural World (3)\*
- ENGL 604. Seminar: Literary Period or Movement (3)\*
- ENGL 606. Seminar: 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

**History Courses (HIST)**

- HIST 640. Directed Readings 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

**Political Science Courses (POL S)**

- POL S 655. Seminar in General Comparative 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

**Public Administration 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 740. Seminar in Social Psychology: Sociological Approaches (3)  
 SOC 798. Special Study (1-3) Cr/NC/RP

**Spanish Courses (SPAN)**

- SPAN 601. Seminar in Hispanic Literary Theory (3)  
 SPAN 696. Selected Topics (3)\*  
 SPAN 750. Seminar in Spanish American Literature (3)  
 SPAN 755. Seminar in Spanish American Culture, Film, and Society (3)  
 SPAN 770. Applied Spanish Linguistics for Teachers (3)  
 SPAN 798. Special Study (1-3) Cr/NC/RP

**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

\*Acceptable when of relevant content.

**Liberal Arts and Sciences (MALAS)**

*In the College of Arts and Letters*

**GRADUATE COURSES**

**MALAS 600. Interdisciplinary Study in Liberal Arts and Sciences (3-3-3-3)**

Prerequisite: Graduate standing.

MALAS seminars are divided into four general areas with content that varies semester to semester. Each course may be repeated once with new content. See *Class Schedule* for specific content. Maximum credit six units for each of the following courses: MALAS 600A, 600B, 600C, 600D.

- A. Cultural Studies
- B. Science and Society, Environmental Studies
- C. Globalization, Technology, Future Studies
- D. Media Studies, Fine Arts, Transformative Arts

**MALAS 601. Seminar in Interdisciplinary Thinking (3)**

Prerequisites: Graduate standing.

Nature of interdisciplinary thinking. Ways of knowing and schools of thought in multiple disciplines. Interdisciplinary methods to analyze social issues. See *Class Schedule* for specific content.

**MALAS 798. Special Study (3) Cr/NC/RP**

Prerequisites: Graduate standing.

Individual study on a given topic through interdisciplinary perspectives.

**MALAS 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 Master of Arts degree in Liberal Arts and Sciences.

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

Prerequisites: 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.

**Linguistics (LING)**

*In the Department of Linguistics and Asian/Middle Eastern Languages  
 In the College of Arts and Letters*

**UPPER DIVISION COURSES**

**LING 505. Writing for Graduate Students (3)**

Prerequisites: Conditional or classified admission to an SDSU graduate program or undergraduates with consent of instructor.

Conventions of scholarly writing appropriate for student papers, theses, or academic journal articles. Development of research questions and literature reviews as appropriate for students' disciplines. Revision of current or previous course papers according to disciplinary conventions.

**LING 520. Fundamentals of Linguistics (3)**

Prerequisites: 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)**

Prerequisites: Linguistics 420 or 520.

Theoretical principles of transformational-generative phonology.

**LING 522. Syntax (3)**

Prerequisites: Linguistics 420 or 520.

Theoretical principles of transformational-generative syntax.

**LING 523. Morphology (3)**

Prerequisites: Linguistics 420 or 520.

Theoretical principles of words structure, including inflection, derivation, and compounding; organization of the lexicon; structure of inflectional paradigms; morphophonological and morphosyntactic alterations; and computational applications.

**LING 524. American Dialectology (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Six upper division units in linguistics.

English morphology, syntax, and discourse structure, including simple and complex sentence structure; lexical categories and subcategories; discourse functions of selected constructions. Problems and solutions in teaching English grammar.

**LING 550. Theory and Practice of English as a Second Language (3)**

Prerequisites: 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)**

Prerequisites: A course in introductory linguistics.

Investigation of the correlation of social structure and linguistic behavior.

### LING 552. Psycholinguistics (3)

Prerequisites: 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)

Prerequisites: Linguistics 420 or 520 or Speech, Language, and Hearing Sciences 300.

Bilingual societies; language choice by bilinguals; bilingual language acquisition; effects of bilingualism on language structure and use.

### LING 554. Child Language Acquisition (3)

Prerequisites: 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)

Prerequisites: 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 556. Computer Assisted Language Learning and Teaching (3)

Prerequisites: Linguistics 420 or 520; and credit or concurrent registration in Linguistics 550.

Theory and practice of computer assisted language learning and language teaching. Hands-on experience with pedagogical aspects of using technology in the language classroom.

### 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)

Prerequisites: Upper division standing.

Advanced study of selected topics. May be repeated with new content. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

## GRADUATE COURSES

### LING 610. Topics in Historical Linguistics (3)

Prerequisites: 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)

Prerequisites: Linguistics 522.

Advanced study of formal syntactic theory.

### LING 621. Advanced English Phonology (3)

Prerequisites: 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)

Prerequisites: Linguistics 522.

Functional and discourse-oriented approaches to syntax and syntactic approaches to discourse.

### LING 623. Immigrant Languages (3)

Prerequisites: 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)

Prerequisites: Linguistics 550.

Materials development and adaptation for teaching English as a second language and foreign language.

### LING 651. Sociology of Language (3)

Prerequisites: 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)

Prerequisites: 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)

Prerequisites: 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 656. Quantitative Research Methods in Language Studies (3)

Prerequisites: Linguistics 420 or 520.

Research design and quantitative research methods for linguistic applications. Critical evaluation of published research studies; empirical research project.

**LING 657. Foundations of Language Assessment (3)**

Prerequisites: Linguistics 550; and Linguistics 650, 652 or 653.

Fundamental principles and goals of language assessment and language assessment research: characteristics of assessment methods; analyzing test tasks; designing test items; describing test scores; approaches to estimating reliability; validity and validation; authenticity and impact.

**LING 660. History of Linguistics (3)**

Prerequisites: Two courses in linguistics or equivalent background. Background and development of modern linguistic theory.

**LING 681. Statistical Methods in Computational Linguistics (3)**

Prerequisites: 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 696. Advanced Topics in Linguistics (1-3)**

Prerequisites: Consent of instructor.

Advanced study in specific areas of linguistics. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**LING 740. Internship in English as a Second Language and Foreign Language Teaching (3) Cr/NC**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

**Management (MGT)**

*In the College of Business Administration*

**UPPER DIVISION COURSE****MGT 596. Advanced Topics in Management (3)**

Prerequisites: Six upper division units in management.

Advanced special topics in management. May be repeated with new content. 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES****MGT 626. Competitive Analysis of Industries (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**MGT 710. Seminar in World Business Environment (3)**

Prerequisites: 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 721. Seminar in Group Processes and Leadership (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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 743. Seminar in Business Plan Development (3)**

Prerequisites: Management 724.

Principles and techniques for developing a business plan.

### **MGT 744. Seminar in Managing the Growing Firm (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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 (MKTG)

*In the College of Business Administration*

### 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser. (Formerly numbered Marketing 795.)

#### **MKTG 701. Seminar in Marketing Planning and Programs (3)**

Prerequisites: 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 729. Contemporary Issues in Marketing Theory and Practice (3)**

Prerequisites: Business Administration 655.

Issues in marketing theory and practice: examination and application of contemporary theories and techniques in relation to changes in marketing environment. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

#### **MKTG 760. Seminar in Consumer Behavior (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Business Administration 655.

Sales management and personal selling decisions and strategies in business organizations.

#### **MKTG 766. Seminar in Marketing Research (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Business Administration 655.

Theory and application of marketing utilizing the Internet and associated issues of electronic commerce.

**MKTG 769. Seminar in International Marketing (3)**

Prerequisites: 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)**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

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

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

## Mathematics (MATH)

*In the Department of Mathematics and Statistics*

*In the College of Sciences*

**UPPER DIVISION COURSES**  
(Also acceptable for Advanced Degrees)

**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.

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Mathematics 254.

Geometry emphasizing relationships between points, lines, and conics. Euclidean geometry and some non-Euclidean geometries as special cases of projective geometry.

**MATH 521A. Abstract Algebra (3)**

Prerequisites: Mathematics 245 and 254.

Abstract algebra, including elementary number theory, groups, and rings.

**MATH 521B. Abstract Algebra (3)**

Prerequisites: 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)**

Prerequisite: Mathematics 245.

Theory of numbers to include congruences, Diophantine equations, and a study of prime numbers; cryptography.

**MATH 523. Mathematical Logic (3)**

Prerequisites: 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)**

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)**

Prerequisites: 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)**

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)**

Prerequisites: Mathematics 252.

Analytic functions, Cauchy-Riemann equations, theorem of Cauchy, Laurent series, calculus of residues, and applications.

**MATH 533. Vector Calculus (3)**

Prerequisites: 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)**

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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Minimum grade of C in Mathematics 151; Mathematics 254 or 342A, 342B.

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, stable/unstable manifolds, bifurcations. Applications in biology, chemistry, physics, engineering, and other sciences.

**MATH 541. Introduction to Numerical Analysis and Computing (3)**

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)**

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)**

Prerequisites: 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: Statistics 550 or 551A.

Risk evaluation. Numerical procedures for evaluating financial derivatives. Monte Carlo simulation techniques.

**MATH 561. Applied Graph Theory (3)**

Prerequisites: 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)**

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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Statistics 550 or 551A.

Derivatives and term structures, method of principal components, theory of portfolio optimization, some numerical methods.

**MATH 596. Advanced Topics in Mathematics (1-4)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### GRADUATE COURSES

**MATH 623. Linear Algebra and Matrix Theory (3)**

Prerequisites: 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, MacWilliam'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)**

Prerequisites: 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)**

Prerequisites: 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 635. Pattern Formation (3)**

Prerequisites: Mathematics 337 or 531 and Mathematics 254 or 342A, 342B.

Linear stability, marginal stability curves, classification. One dimensional patterns, bifurcations. Two dimensional patterns, square and hexagonal patterns, spirals, defects. Diffusion driven instability, Turing patterns. Spatio-temporal chaos. Applications in biology, chemistry, and physics.

**MATH 636. Mathematical Modeling (3)**

Prerequisites: Mathematics 254 and 337 or Mathematics 342A and 342B or Engineering 280.

Advanced models from the physical, natural, and social sciences. Emphasis on classes of models and corresponding mathematical structures.

**MATH 637. Theory of Ordinary Differential Equations (3)**

Prerequisites: Mathematics 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)**

Prerequisites: Mathematics 337 or 537 and Mathematics 254 or 342A, 342B.

Nonlinear systems of differential equations, potential fields, periodic solutions, Lyapunov functions. Chaos in differential equations, Lyapunov exponents, chaotic attractors, Poincare maps. Lorenz and Rossler attractors, forced oscillators, Chua's circuit, stable manifolds. Bifurcations. Applications in science and engineering.



**MATH 639. Nonlinear Waves (3)**

Prerequisite: Mathematics 531 or 537.

Linear waves, dissipation, dispersion. Conservation laws. Water waves. KdV equation, solitary waves, cnoidal waves. Scattering and inverse scattering. Perturbation theory. Nonlinear Schroedinger equation, dark and bright solitons, vortex solutions. Variational techniques, modulational instability, stability.

**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)**

Prerequisites: Graduate standing.

Intensive study in specific areas of mathematical sciences. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**MATH 720. Seminar (1-3)**

Prerequisites: 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**

Prerequisites: Award of graduate teaching associatenesship 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.

**MATH 797. Research (1-3) Cr/NC/RP**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

For additional courses useful to mathematicians see the sections under:

- Computer Science
- Mathematics and Science Education
- Statistics

**Mathematics and Science Education (MSE)**

**GRADUATE COURSES**

**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.

**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.

## Mathematics Specialist Certificate Program and Mathematics Education

### 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.

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. Assessment in Mathematics Education  
Teacher Education 610A. Seminar in Mathematics Education—Elementary School

## Mathematics Specialist Certificate Program and Mathematics Education (MATH) (MTHED)

### UPPER DIVISION COURSES (MATH) (Also acceptable for Advanced Degrees)

#### MATH 501A. Reasoning: Place Value and Arithmetic Operations (1)

Prerequisites: Teaching credential and consent of instructor.  
Place value and its role in development and understanding of arithmetic operations, to include numeration systems, student methods, standard algorithms, and mental computation. (Formerly numbered Mathematics 281A.)

#### MATH 501B. Reasoning: Rational Numbers and Real Number Systems (1)

Prerequisites: Teaching credential and consent of instructor.  
Rational numbers and structure of real number system, to include meanings and models for fractions with attention to operations on rational numbers. (Formerly numbered Mathematics 281A.)

#### MATH 502A. Reasoning: Geometric Shapes (1)

Prerequisites: Teaching credential and consent of instructor.  
Geometry to include classification and representation of polyhedra, hierarchical relationships among quadrilaterals, symmetry and transformations in the plane. (Formerly numbered Mathematics 281B.)

#### MATH 502B. Reasoning: Measurement (1)

Prerequisites: Teaching credential and consent of instructor.  
Key ideas of measurement, development of area formulas for two-dimensional figures, size changes, and similarity. (Formerly numbered Mathematics 281B.)

#### MATH 503A. Reasoning: Foundations of Quantitative Thinking (1)

Prerequisites: Teaching credential and consent of instructor.  
Reasoning about quantities and their measurement and relationships among these quantities, to include representations of these relationships. Understand situations that call for additive or multiplicative reasoning; important role of these ideas in development of quantitative reasoning skills in primary grades. (Formerly numbered Mathematics 381.)

#### MATH 503B. Reasoning: Foundations of Algebraic Thinking (1)

Prerequisites: Teaching credential and consent of instructor.  
Pattern searching, equivalence, making and justifying conjectures. Preparation for teaching California required K-12 algebraic reasoning strand. (Formerly numbered Mathematics 382.)

#### MATH 504A. Reasoning: Quantities and Mathematical Relationships (1)

Prerequisites: Teaching credential and consent of instructor.  
Reasoning about measurable characteristics in problem context and relationships among these measurements. Additive, multiplicative reasoning, and proportional reasoning in middle grades. (Formerly numbered Mathematics 383.)

#### MATH 504B. Reasoning: Algebra and Nature of Change (1)

Prerequisites: Teaching credential and consent of instructor.  
Pattern searching, generalizing, graphing to represent quantitative relationships, and role of these topics in preparing elementary and middle school students for algebra. (Formerly numbered Mathematics 384.)

#### MATH 505A. Reasoning: Probability (1)

Prerequisites: Teaching credential and consent of instructor.  
Probabilistic situations, theoretical probabilities, and expected values. (Formerly numbered Mathematics 386.)

#### MATH 505B. Reasoning: Statistics (1)

Prerequisites: Teaching credential and consent of instructor.  
Gathering, representing, and interpreting data sets, measures of central tendency, and characteristics of normal distributions. (Formerly numbered Mathematics 385.)

### 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.

### UPPER DIVISION COURSES (MTHED) (Also acceptable for Advanced Degrees)

#### 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.

**MTHED 571. Children's Mathematics Understanding in Primary Grades (Part I) (1-3)**

Prerequisites: Admission to mathematics specialist certificate program.

Ongoing assessment and instructional decision-making for increasing children's achievement and understanding of number, operations, and algebra in the primary grades. Maximum credit three units.

**MTHED 572. Children's Mathematics Understanding in Primary Grades (Part II) (1-3)**

Prerequisites: Admission to mathematics specialist certificate program.

Ongoing assessment and instructional decision-making for increasing children's achievement and understanding of rational numbers, geometry, and measurement in the primary grades. Maximum credit three units.

**MTHED 573. Children's Mathematics Understanding in Upper Elementary Grades (Part I) (1-3)**

Prerequisites: Admission to mathematics specialist certificate program.

Ongoing assessment and instructional decision-making for increasing children's achievement and understanding of number, operations, and algebra in the upper elementary grades. Maximum credit three units.

**MTHED 574. Children's Mathematics Understanding in Upper Elementary Grades (Part II) (1-3)**

Prerequisites: Admission to mathematics specialist certificate program.

Ongoing assessment and instructional decision-making for increasing children's achievement and understanding of rational numbers, geometry and measurement in the upper elementary grades. Maximum credit three units.

**GRADUATE COURSES**

**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.

**MTHED 603. Seminar on Learning Theories in Mathematics Education (3)**

Prerequisites: Consent of instructor or graduate adviser.

Application of several major learning theories (e.g. behaviorism, structuralism, radical constructivism, information processing, and sociocultural perspectives) to research on the learning and teaching of mathematics.

**MTHED 604. Seminar on Teaching Issues in Mathematics (3)**

Prerequisites: Consent of instructor or graduate adviser.

Mathematics education research pertaining to teaching of mathematics. Readings chosen to bridge theory and practice divide.

**MTHED 605. Algebra in the 7-14 Curriculum (3)**

Prerequisites: 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)**

Prerequisites: 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.

**Mechanical Engineering (M E)**

*In the College of Engineering*

**UPPER DIVISION COURSES**

**NOTE: Proof of Completion of prerequisites required for all Mechanical Engineering 300-, 400-, and 500-level courses: Copy of transcript. In addition, Mechanical Engineering 390, 450, 490A, and 530 require evidence of concurrent registration in appropriate courses.**

**M E 502. Continuum Mechanics (3)**

Prerequisites: Civil Engineering 301 and Engineering Mechanics 340.

Mechanics of continua, stress tensor, deformation and flow, constitutive relations. Applications to common solids and fluids

**M E 514. Advanced Machine Design (3)**

Prerequisites: Mechanical Engineering 314 and 340.

Application of advanced mechanics of materials to design and analysis of mechanical elements. Probabilistic design and finite element methods and applications. Design projects involve extensive use of finite element programs. (Formerly numbered Mechanical Engineering 510.)

**M E 520. Introduction to Mechanical Vibrations (3)**

Prerequisites: Mechanical Engineering 312 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: Mechanical Engineering 312.

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 543. Powder-Based Manufacturing (3)**

Prerequisite: Mechanical Engineering 340.

Manufacturing of micro and nano-structured engineering components and composites starting with metal and/or ceramic powders. Powder production methods, characterization, powder shaping and compaction, sintering, hot consolidation, design considerations, and finishing operations.

**M E 546. Computer Aided Manufacturing (3)**

Prerequisites: Mechanical Engineering 102, 314, 340; and Engineering 280 with a grade of C or better.

Computer controlled manufacturing and assembly techniques and devices. Databases and special languages. Agile manufacturing soft ware programs and technologies.

### **M E 552. Heating, Ventilating, and Air-Conditioning (3)**

Prerequisites: Mechanical Engineering 351 and 452.

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. (Formerly numbered Mechanical Engineering 582.)

### **M E 555. Thermal Systems Analysis and Design (3)**

Prerequisites: Mechanical Engineering 351 and 452.

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. (Formerly numbered Mechanical Engineering 570.)

### **M E 556. Solar Energy Conversion (3)**

Prerequisites: Engineering Mechanics 340, Mechanical Engineering 351 and 452.

Application of thermodynamics, fluid mechanics and heat transfer to the thermal design of solar energy conversion systems. Computer simulations utilized. (Formerly numbered Mechanical Engineering 586.)

### **M E 580. Biomechanics (3)**

Prerequisites: Civil Engineering 301 and Engineering Mechanics 340.

Application of engineering methodologies for quantitative understanding of biological/physiological phenomena. Continuum mechanics principles. Cardiovascular system and its components viewed from a mechanistic standpoint. (Formerly numbered Mechanical Engineering 590.)

### **M E 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 240. For electrical engineering majors: E E 330 and M E 240. For mechanical engineering majors: E E 303, E M 220, and M E 240.

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. (Formerly numbered Engineering Mechanics 585.)

### **M E 596. Advanced Mechanical Engineering Topics (1-3)**

Prerequisites: Consent of instructor. **Proof of completion of prerequisite required:** Copy of transcript.

Modern developments in mechanical engineering. May be repeated with new content. 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

## **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 514.

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 312 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 312, 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)**

Prerequisites: 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 646. Mechanics of Sintering (3)**

Prerequisites: Mechanical Engineering 340 and 514.

Practical aspects and conceptual models and mechanisms associated with sintering of ceramic and metal powders.

### **M E 651. Advanced Thermodynamics (3)**

Prerequisites: Engineering 280 with a grade of C or better and Mechanical Engineering 351.

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 653. Combustion (3)**

Prerequisites: Mechanical Engineering 351.

Thermodynamics of combustion, chemical equilibrium, chemical kinetics, combustion of gaseous, liquid and solid fuels, and their application.

### **M E 656. Conduction Heat and Transfer (3)**

Prerequisites: Mechanical Engineering 452 and Engineering 510.

Conduction heat transfer analysis of multi-dimensional and transient processes using both classical analysis and numerical methods. (Formerly numbered Mechanical Engineering 671.)

### **M E 657. Convection Heat Transfer (3)**

Prerequisites: Mechanical Engineering 452 and Engineering 510.

Convection heat transfer processes under laminar and turbulent conditions. Mass transfer. Scaling arguments, analytical and numerical modeling. (Formerly numbered Mechanical Engineering 673.)

### **M E 658. Radiation Heat Transfer (3)**

Prerequisites: Mechanical Engineering 452 and Engineering 510.

Radiation heat transfer processes. Radiative properties of surfaces and gases. Absorption, emission, and scattering phenomena. Numerical modeling. (Formerly numbered Mechanical Engineering 675.)

### **M E 661. Gas Dynamics (3)**

Prerequisites: Mechanical Engineering 351 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 681. Biomaterials (3)**

Prerequisites: Mechanical Engineering 240 and 580.

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. (Formerly numbered Mechanical Engineering 691.)

### **M E 683. Design of Medical Devices (3)**

Prerequisites: Mechanical Engineering 314 and 580.

Device design, including biomaterials, human factors engineering, reliability, and manufacturing. Topics relevant to industry reviewed include regulatory, documentation, quality, and legal.

**M E 685. Micro-Electro-Mechanical Systems (MEMS) Design and Applications (3)**  
(Same course as Electrical Engineering 685)

Prerequisite: Mechanical Engineering 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 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

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**Molecular Biology (M BIO)***In the College of Sciences***Courses Acceptable for the Concentration in Molecular Biology****UPPER DIVISION COURSES****Biology (BIOL)**

- BIOL 510. Molecular Evolution (3)
- BIOL 511. Evolution of Development (3)
- BIOL 549. Microbial Genetics and Physiology (3)
- BIOL 551. Recombinant DNA (3)
- BIOL 554. Molecular Virology (3)
- BIOL 555. Principles of Electron Microscopy (1)
- BIOL 556. Scanning Electron Microscopy Laboratory (2)
- BIOL 557. Transmission Electron Microscopy Laboratory (3)
- BIOL 567. Advanced Biochemistry, Cellular, and Molecular Biology (4)

- BIOL 568. Bioinformatics (3)
- BIOL 570. Neurobiology (3)
- BIOL 575. Molecular Basis of Heart Disease (3)
- BIOL 576. Developmental Biology (3)
- BIOL 584. Medical Microbiology (3)
- BIOL 585. Cellular and Molecular Immunology (3)
- BIOL 590. Physiology of Human Systems (4)
- BIOL 594. Biotechnology Research Rounds (2) Cr/NC
- 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 560. General Biochemistry (3)
- CHEM 562. Intermediary Metabolism (2)
- CHEM 563. Nucleic Acid Function and Protein Synthesis (2)
- CHEM 564. Receptor Biochemistry and Protein Modification (2)
- 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 763. Cellular Regulation (2)
- CHEM 764. Membrane Biochemistry (1-3)
- 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****M BIO 600. Seminar in Molecular Biology (1-3)**

Prerequisites: 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)**

Prerequisites: 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.

## Music (MUSIC)

*In the School of Music and Dance*

*In the College of Professional Studies and Fine Arts*

### 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.

Prerequisites: 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 517. Orchestra Audition Practices (1)**

Two hours of activity.

Prerequisite: Graduate or upper division music major standing.

Techniques necessary to win an orchestral audition. Practice and preparation, live mock auditions, addressing stage fright and resume evaluation. See *Class Schedule* for specific content.

#### **MUSIC 541. Performance Studies Pedagogy (3)**

Two lectures and three hours of laboratory.

Prerequisites: Consent of instructor.

Teaching strategies for beginning and intermediate applied music. Survey and evaluation of teaching materials. Observation of individual or group lessons. See *Class Schedule* for specific content. Not open to students with credit in Music 541A and 541C.

#### **MUSIC 542. Performance Studies Laboratory (2)**

One lecture and three hours of laboratory.

Prerequisite: Music 541 with grade of C (2.0) or better.

Practical experience in teaching of individual or group lessons. See *Class Schedule* for specific content. Not open to students with credit in Music 542A and 542C.

#### **MUSIC 543. Diction II (1)**

Prerequisite: Music 243.

Principles of pronunciation and enunciation. Application to song and opera in Spanish, German, and French.

#### **MUSIC 545. Music Cultures of the World (3)**

Prerequisite: Graduate or upper division standing in music.

Diverse music traditions from around the world (traditional, classical, popular, sacred, folk). Ethnomusicology and contemporary topics in crosscultural music study.

#### **MUSIC 554. Music Literature (2)**

Prerequisites: Music 205B with a grade of C (2.0) or better.

Study of music literature. Analysis of scores and recordings. May be repeated with new course content. See *Class Schedule* for specific content. Maximum credit six units applicable to a bachelor's and master's degree.

#### **MUSIC 560. Music and Visual Media (3)**

Two lectures and three hours of activity.

Prerequisites: Music 460.

Techniques and aesthetics of combining music/sounds and visual elements, including contemporary film scoring techniques, sound design for installations and performance art, video game scoring and experimental immersive 3-D virtual reality.

#### **MUSIC 561. Area Studies: Ethnomusicology (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Three hours.

Prerequisites: 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)**

Five hours.

Prerequisites: 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)**

Five hours.

Prerequisites: 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)**

Five hours.

Prerequisites: 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.

Prerequisites: 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)**

Five hours.

Prerequisites: 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)**

Five hours.

Prerequisites: 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)**

Three hours.

Prerequisites: 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)**

Prerequisites: 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 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**MUSIC 598. Seminar in Music Theory (3)**

Prerequisite: Admission to the graduate program.  
Synthesis of theoretical forms, concepts, and practices required for full candidacy in the graduate music program. Not applicable to the master's degree in music.

**GRADUATE COURSES**

**MUSIC 610. Seminar in Ethnomusicology (3)**

Prerequisites: 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.

**MUSIC 614. Seminar in Music Theory: Conceptual Analysis of the Jazz Idiom (3)**

Current advanced analytic techniques in the jazz idiom.

**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.

**MUSIC 641. Piano Pedagogy: Adolescent to Adult (3)**

Two lectures and three hours of laboratory.

Prerequisite: Music 542.

Study of music through the piano for adolescent to adult with analysis and application of appropriate teaching procedures and learning theories. Analysis of literature with corresponding techniques, musical skills, and creativity. Supervised teaching.

**MUSIC 651. Advanced Performance Studies (1-3)**

Thirteen one-half hour private lessons (1 unit); thirteen one-hour private lessons (2 units); nineteen one-half 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.

**MUSIC 653. Seminar in Music History: Jazz (3)**

Intensive historical study of the jazz idiom.

**MUSIC 654. Seminar in Music History: Interrelationships in World Music History (3)**

Intensive historical study of the interrelationships of world cultures.

**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)**

Prerequisites: Graduate standing.

Intensive study in specific areas of music. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

**Natural Science (N SCI)**

*In the College of Sciences*

*Administered by the Department of Physics*

**UPPER DIVISION COURSE**

**N SCI 596. Special Topics in Natural Science (1-4)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### GRADUATE COURSES

#### **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**

Prerequisites: 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 (NURS)

*In the College of Health and Human Services*

### UPPER DIVISION COURSES

#### **NURS 501. Advanced Health Assessment and Health Promotion (3)**

Prerequisite: Consent of School of Nursing Student Service Adviser; concurrent registration in Nursing 501L.

Physical and psychosocial assessment techniques, health promotion strategies for select populations. (Nursing 501 and 501L formerly numbered Nursing 500.)

#### **NURS 501L. Advanced Health Assessment and Health Promotion Laboratory (1)**

Three hours of laboratory.

Prerequisites: Consent of School of Nursing Student Service Adviser; concurrent registration in Nursing 501.

Laboratory experience in advanced health assessment and health promotion. (Nursing 501 and 501L formerly numbered Nursing 500.)

#### **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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### GRADUATE COURSES

#### **NURS 601. Assessment and Health Promotion of Children and Adolescents (4)**

Three lectures and three hours of laboratory.

Prerequisites: Consent of school health credential adviser or graduate adviser or RN to BS adviser.

Assessing physical, emotional, psychosocial and mental health of children and adolescents from birth to 19 years in hospital and community settings. Strategies for individual and group assessment. Age-appropriate interview techniques. Health promotion modalities.

#### **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.

#### **NURS 604B. Theoretical and Research Bases of Nursing (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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.

Prerequisites: 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 632. Community Health Nursing (3)**

Prerequisites: Nursing 414 and admission to school nurse or nurse midwife programs.

Community and needs assessments. Community participation and transcultural considerations. Grant writing, ethical dilemmas, evidence-based practice, program planning, staffing, budgeting, and evaluation.

#### **NURS 634. Physiology of Pregnancy and Fetal Development (3)**

Prerequisites: 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 501, 501L, 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 636. Women's Health Assessment and Management I (3)**

Prerequisites: Nursing 501, 501L, 610, 658. Concurrent registration in Nursing 637.

Comprehensive assessment and management of ambulatory care for women throughout childbearing cycle. Pregnancy, prenatal care, fetal physiology, and development.

#### **NURS 637. Women's Health/Nurse Midwifery Clinical Practicum I (2 or 4 or 6)**

Six to 18 hours per week in consultation with adviser.

Prerequisite: Concurrent registration in Nursing 636.

Laboratory and clinical experiences providing obstetrical, gynecological, primary, and well woman care throughout lifespan.

#### **NURS 638. Nurse Midwifery Intrapartum/Newborn Assessment and Management (3)**

Prerequisites: Nursing 636 and 637.

Assessment and management of women with emphasis on labor and birth, postpartum, and normal newborn.



**NURS 639. Women's Health/Nurse Midwifery Clinical Practicum II (4 or 6)**

Twelve to 18 hours per week in consultation with adviser.  
Prerequisite: Concurrent registration in Nursing 638.

Clinical experiences in one or more of the following settings: gynecological, well women/family planning, primary care, obstetrics/prenatal, intrapartum, post-partum, and newborn care.

**NURS 640. Principles of Nurse Midwifery I (3)**

Prerequisites: Nursing 501, 501L, 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 501, 501L, 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 644. Program and Curriculum Development in Nursing Education (3)**

Prerequisites: Graduate standing.

Role of nurse educators in academic and clinical settings including staff development and outcome evaluation. State, federal, and professional regulatory environment of nursing programs.

**NURS 645. Teaching and Learning in Nursing Education (3)**

Prerequisites: Credit or concurrent registration in Nursing 644.

Classroom and clinical teaching strategies in nursing education. Measuring learning, item and examination construction, evaluation, designing written assignments and clinical evaluation tools, and working with challenging learners.

**NURS 646. Nursing Education Practicum (3)**

One hundred thirty-five hours of practicum over the semester.

Prerequisites: Nursing 645.

Theory related to practice while teaching in academic and/or clinical settings. Nurse educator activities across the spectrum to include committee work, classroom and clinical teaching and evaluation of learners.

**NURS 654. Advanced Practice Nursing: Primary Care I (3)**

Prerequisites: Nursing 501, 501L, 604A, 610, 658, 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.

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Nursing 501, 501L.

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)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**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 725. Financial Management in Health Systems (3)**

Prerequisite: Nursing 620 or Public Health 641 or 650.

Health care economics, budget planning and management skills and financial analysis skills necessary to facilitate management decision making and writing business plans.

**NURS 726. Advanced Nursing Systems Administration Practicum (3)**

Nine hours of laboratory.

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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 744. Women's Health/Nurse Midwifery Assessment and Management III (3)**

Prerequisite: Nursing 638. Concurrent registration in Nursing 745.

Theoretical concepts and principles applied to management of pathophysiological and psychological issues in women's healthcare. Contemporary issues in well women, gynecological, and primary care.

### **NURS 745. Women's Health/Nurse Midwifery Clinical Practicum III (4-6)**

Twelve to 18 hours per week in consultation with adviser.

Prerequisite: Concurrent registration in Nursing 744.

Clinical experiences in one or more of the following settings: gynecological, well women/family planning, primary care, obstetrics/prenatal, intrapartum, post-partum, and newborn care.

### **NURS 751. Advanced Practice Nursing: Acute/Critical Care Theory and Technology (3)**

Prerequisite: Consent of advanced practice nursing concentration chair.

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.

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

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## Nutrition (NUTR)

*In the School of Exercise and Nutritional Sciences  
In the College of Professional Studies and Fine Arts*

### UPPER DIVISION COURSES

#### **NUTR 510. Nutrition and Community Health (3)**

Two lectures and three hours of activity.

Prerequisites: Grade of C or better in Nutrition 302, 302L, Nutrition 203, 304, 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)**

Prerequisites: Nine upper division units in nutrition.

Advanced study of selected topics. May be repeated with new content. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of nine units of 596. No more than six units of 596 may be applied to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### GRADUATE COURSES

#### **NUTR 600. Seminar: Foods and Nutrition (3)**

Prerequisites: Nutrition 301, 302, and 302L.

Introductory seminar of research and research publications in foods and nutrition.

#### **NUTR 606. Physiological Bases of Diet Therapy (3)**

Prerequisites: Nutrition 406. Recommended: Chemistry 361 or 560.

Dietary modifications, adjunct to medical treatment, used to prevent and alleviate the biochemical and physiological symptoms of disease.

#### **NUTR 607. Child Nutrition (3)**

Prerequisites: Nutrition 302 and 302L.

Nutrition, health, and biochemical growth in children. Conditions leading to malnutrition, prevention, and correction.

#### **NUTR 608. Geriatric Nutrition (3)**

Prerequisites: Nutrition 302 and 302L.

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, 302L, 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)**

Prerequisites: Nutrition 302 and 302L.

Reading and analyses of basic and applied research in nutrition.

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

Prerequisites: 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**

Prerequisites: 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.

**NUTR 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisites: 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. Registration in 799C limited to two semesters.

## Philosophy (PHIL)

*In the College of Arts and Letters*

### UPPER DIVISION COURSES

**PHIL 506. Twentieth Century Continental Philosophy (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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.

Philosophical and ethical investigation into nature of law, rights, liberty, responsibility, and punishment.

**PHIL 512. Political Philosophy (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Six units in philosophy.

Philosophical analysis of knowledge, including conceptions of belief, justification, and truth.

**PHIL 525. Metaphysics (3)**

Prerequisites: 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)**

Prerequisites: Six units in philosophy.

Advanced topics in ethical theory, including normative ethics and meta-ethics. May include historical or contemporary readings or both. Issues may include content of moral value, nature of moral judgment, and accounts of virtue and right action.

**PHIL 531. Philosophy of Language (3)**

Prerequisites: 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)**

Prerequisites: Six units in philosophy.

Accounts of historical development, historical change, and nature of historical explanation.

**PHIL 535. Philosophy of Religion (3)**

Prerequisites: Six units in philosophy.

Philosophical examination of issues raised by the religious impulse in man.

**PHIL 536. Philosophy of Mind (3)**

Prerequisites: Three upper division units in philosophy.

Prominent theories and arguments regarding relation between mind and body. Varieties of dualism considered along with major materialist rivals.

**PHIL 537. Philosophy of Science (3)**

Prerequisites: 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)**

Prerequisites: Philosophy 101, 102 or 103.

Major documents in the history of aesthetics.

**PHIL 542. Philosophy of Art (3)**

Prerequisites: 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 565. Asian Philosophies (3)**

Prerequisite: Six units in philosophy. Strongly recommended: Philosophy 351.

Dimensions of Asian philosophies, past and present. Encounter between Buddhism and post-modern science, contemporary Asian philosophers ("global gurus") and their impact on non-Asian cultures, enigmatic notion of emptiness (sunya, wu). See *Class Schedule* for specific topic. May be repeated with new content. Maximum credit six units.

**PHIL 575. A Major Philosopher (3)**

Prerequisites: 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)**

Prerequisites: 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 nine units of 596 applicable to the major in philosophy. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### PHIL 599. Special Study (1-3)

Prerequisites: 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)

Prerequisites: 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 nine units applicable to a master's degree.

#### PHIL 610. Seminar in Philosophical Problems: Values (3)

Prerequisites: 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 nine units applicable to a master's degree.

#### PHIL 620. Seminar in Philosophical Problems: Knowledge and Reality (3)

Prerequisites: 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 nine units applicable to a master's degree.

#### PHIL 630. Seminar in Current Philosophical Issues (3)

Prerequisites: 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 nine units applicable to a master's degree.

#### PHIL 696. Seminar in Selected Topics (3)

Prerequisites: Twelve upper division units in philosophy.

Intensive study in specific areas of philosophy. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

#### PHIL 701. Seminar in Teaching Philosophy (3)

Prerequisites: Classified graduate standing in philosophy.

Critical thinking and writing skills to teach philosophy. Syllabus construction, teaching techniques, assessment, and outcomes measurement.

#### 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

Prerequisites: 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

Prerequisites: 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. Registration in 799C limited to two semesters.

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## Physics (PHYS)

*In the College of Sciences*

### UPPER DIVISION COURSES

#### PHYS 516. Theory of Scientific Instrumentation (3)

Prerequisites: Physics 311, 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)

Prerequisites: Credit or concurrent registration in 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

Prerequisites: 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: 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)

Prerequisites: 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: Credit or concurrent registration in Physics 410.

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 596. Special Topics in Physics (1-4)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES**

**PHYS 600. Seminar (1-3)**

Prerequisites: 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. Electromagnetic Theory (3)**

Prerequisites: Physics 400B.

Electrostatics, magnetic induction, and magnetostatics, Maxwell's equations, electromagnetic waves and radiation, fields in macroscopic media, special relativity.

**PHYS 604B. Electromagnetic Theory (3)**

Prerequisites: Physics 604A.

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 350 and Mathematics 342B.

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 Schroedinger Equation, matrices and Hilbert space, angular momentum and spin, atomic structure, bound-state perturbation theory, many particle systems, transition rates and time-dependent perturbation theory, scattering, and relativistic quantum mechanics.

**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 696. Advanced Topics in Physics (1-3)**

Prerequisites: Consent of instructor.

Intensive study in specific areas of physics. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**PHYS 797. Research (1-3) Cr/NC/RP**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

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**Policy Studies in Language and Cross-Cultural Education (PLC)**

*In the College of Education*

**UPPER DIVISION COURSES**

**PLC 515. Theories and Practices in Multilingual Education (3)**

Theoretical, legal, and historical context for multilingual education; policies and practices in bilingual programs; school and community profiles. Fieldwork required. Some sections taught in Spanish.

**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)**

Prerequisites: Consent of instructor.

Selected topics in bilingual, cross-cultural education and policy studies. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### **GRADUATE COURSES**

### **PLC 600A. Foundations of Democratic Schooling (3)**

Prerequisites: 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. (Formerly numbered Policy Studies in Language and Cross-Cultural Education 600.)

### **PLC 600B. Foundations of Dual Language Programming for Critical Biliteracy Development (3)**

Prerequisite: BCLAD credential or score of 3 on SDSU Spanish examination.

Critical literacy and democratic schooling for dual language program models. Program models that apply to policies and practices that inform literacy curriculum and pedagogy in dual language-biliteracy settings.

### **PLC 601. Language Policies and Practices (3)**

Prerequisites: 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 603. Community and Schools in a Diverse Society (3)**

Prerequisites: Consent of instructor.

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 604. Learning and Teaching Language in a Dual Language Setting (3)**

Prerequisite: BCLAD credential or score of 3 on SDSU Spanish examination.

Dual language instructional methods, modeling oral and written grammatical structures. Language acquisition strategies for English and Spanish in K-12 grades. Emphasis on written structures for academic literacy.

### **PLC 612. Qualitative Inquiries in Communities and Schools (3)**

Prerequisites: Policy Studies in Language and Cross-Cultural Education 600A and Education 690.

Examination and application of qualitative tools of analysis for developing and implementing action research, ethnographic inquiries, case studies, and other qualitative research in classrooms, schools, and communities.

### **PLC 613. Organizational Strategies and Professional Development for the Multicultural School Community (3)**

Prerequisites: 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. Curriculum Development for Urban School Communities (3)**

Prerequisites: Policy Studies in Language and Cross-Cultural Education 600A and 601.

Curriculum development through lens of critical theory. Principles of curriculum and instruction contextualized and with regard to particular educational institutions or work sites from a social justice perspective.

### **PLC 651. Curriculum, Teaching, and Assessment: ELD and SDAIE (1-3)**

Prerequisites: Policy Studies in Language and Cross-Cultural Education 915A or 915B.

English language development and delivery of comprehensive instruction for English learners. Strategies for implementing state adopted instruction programs for ELD in language and content.

### **PLC 652. Literacy and Language: Critically Examining Curriculum for Teaching and Learning (3)**

Prerequisites: Policy Studies in Language and Cross-Cultural Education 650.

Research in literacy and multi-cultural curriculum theories, methods, and teaching connected to community, school, and personal literacies. Literacy practices for educating diverse students; varying definitions of literacy and social-political contexts of literacy curriculum.

### **PLC 686. Seminar in Multicultural Education (1-6)**

Prerequisites: 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**

Prerequisites: 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 902. Professional Portfolio (1) Cr/NC**

Prerequisites: Admission to BCLAD multiple subject credential program.

Portfolio development: Components on reflective teaching; models for teaching approaches, strategies, and methodologies in all subject areas. Maximum credit two units.

### **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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Geological Sciences 412 or Natural Science 412.

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 515, 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
- C. Special Education

**PLC 923. Psychological Foundations of Education and Bilingual Students (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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.

**Political Science (POL S)**

*In the College of Arts and Letters*

**Field I: Political Theory  
UPPER DIVISION COURSES**

**POL S 507. Marx and Marxism (3)**

Prerequisites: Three units in political theory.

Marxism as an important tradition in political theory and with its history as a political movement. Theoretical and political debates in development of Marxism.

**POL S 510. Contemporary Political Thought (3)**

Prerequisites: Political Science 301B or 302 or 305 or 406.

Contemporary political questions and theoretical attempts to address them. Debates about justice, citizenship, and multiculturalism; as well as controversies over nature and scope of politics. (Formerly numbered Political Science 410.)

**Field II: American Politics  
UPPER DIVISION COURSES**

**POL S 530. Political Parties (3)**

Prerequisites: 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)**

Prerequisites: 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 533. Democracy in America (3)**

Prerequisites: Political Science 102 or 320.

Quality and quantity of democratic experience in contemporary America. Construction of American regime, arrangement of power within that regime, expansion and contraction of citizen participation, and principles that Americans generally espouse.

**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 541. Special Problems in Public Law (3)**

Prerequisite: Three units selected from Political Science 346, 347A, 347B, or 348.

Issues of contemporary relevance in field of public law, examining legal, moral, and political implications. (Formerly numbered Political Science 454.)

**Field III: Comparative Politics  
UPPER DIVISION COURSES**

**POL S 555. Comparative Political Systems (3)**

Prerequisites: 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)**

Prerequisites: Political Science 103 or 335.

How political, social, and economic forces shape public policy in selected countries. Focus on policies related to minority and immigrant populations, environment, or poverty.

**POL S 562. Religion and Politics in Comparative Perspective (3)**

Prerequisite: Political Science 103.

Various types of relationships between contemporary states and religious institutions. Concepts and theories on religion and politics. Cases of state-religion interaction.

**POL S 564. Environmental Politics in Global Perspective (3)**

Prerequisites: 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 565. Nations and Nationalism (3)**

Prerequisite: Upper division or graduate standing.

Debates surrounding origins, meaning and future of nationalism, and its most common embodiment, the nation-state form. Theoretical analyses of phenomenon and empirical case studies. (Formerly numbered Political Science 408, 468.)

**POL S 566. Political Change in Latin America (3)**

Prerequisites: 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)**

Prerequisites: Political Science 566.

Domestic and international politics of selected Latin American states.

**POL S 568. Mexican Politics (3)**

Prerequisites: Political Science 101 or 103.

Principal factors in Mexican governmental decision making. Ideology, political groups, tactics of leaders and governmental structure.

**Field IV: International Politics  
UPPER DIVISION COURSES**

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

Prerequisites: Political Science 362 or 375.

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.

**Elective Courses  
UPPER DIVISION COURSES**

**POL S 515. Research Design and Analysis in Political Science (3)**

Prerequisites: Political Science 201.

Does not fulfill undergraduate capstone major requirement. Modeling and design of formal research projects. Theoretical underpinnings and logic of social science analysis. Issues in measurement and scaling. Introduction to testing, including elementary statistical analysis of behavioral data.

**POL S 516. Statistics for Political Scientists (3)**

Prerequisites: Political Science 201.

Does not fulfill undergraduate capstone major requirement. Basic concepts, theories, and methods that are utilized by political and other social scientists using statistics and microcomputers. Intermediate level introduction to statistical methods in political science.

**POL S 596. Topics in Political Science (1-3)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**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 specialization in public policy.

Theoretical approaches used to explain and evaluate public policy performance. Focus on quantitative and qualitative methods of appraising the validity of theories.

**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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Graduate standing.

How processes and outcomes of public policy relate to quality of democracy and distribution of power and resources. Debates about policy within frame of theories of justice. Focus on policy issues such as welfare, environment, housing, privatization, or others.

**POL S 651. Seminar in Migration and Border Politics (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Graduate standing.

Selected topics in political science. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

**Portuguese (PORT)**

*In the Department of Spanish and Portuguese Languages and Literatures*

*In the College of Arts and Letters*

**UPPER DIVISION COURSES**

**NOTE: All upper division courses in Portuguese are taught in Portuguese unless otherwise stated.**

**PORT 534. Portuguese Literature (3)**

Prerequisites: Portuguese 401.

Important movements, authors, and works in the literature of Portugal from its beginnings to the present.

**PORT 535. Brazilian Literature (3)**

Prerequisites: Portuguese 401.

Important movements, authors, and works of the literature of Brazil from the colonial period to modern times.

## Psychology (PSY)

In the College of Sciences

### 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)

Prerequisites: Six units of psychology.

Mind-brain relationship and other topics at the interface of psychology and philosophy.

#### PSY 561. Advanced Neuropsychology (3)

Prerequisites: 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 587. Advanced Principles of Learning and Cognition (3)

Prerequisites: Psychology 211, 270, and 380. Limited to graduate students or psychology majors with senior standing.

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. May be repeated with new content. 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### GRADUATE COURSES

**NOTE: Graduate courses in psychology are not open to post-baccalaureate unclassified students.**

**NOTE: 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

Prerequisites: 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 master's program 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 master's program 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)

Prerequisites: 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 master's program 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 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 master's program 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 master's program 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)

Prerequisites: Consent of instructor.

Intensive study in specific areas of psychology. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

#### PSY 700. Seminar (3)

Prerequisites: Consent of master's program 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 program 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 program 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 program 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)

Prerequisites: 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)

Prerequisites: 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 740. Seminar in Social Psychology (3)

Prerequisites: Undergraduate course in social psychology and graduate level status.

Classic and contemporary issues in social psychology including social influence, person perception, attitudes and attitude change, group dynamics, intergroup conflict, and cultural influence.

**PSY 745. Seminar in Selected Topics in Social Psychology (3)**

Prerequisites: Psychology 740.

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 master's program adviser. Maximum credit six units applicable to a master's degree.

**PSY 746. Seminar in Attitudes and Persuasion (3)**

Prerequisites: 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.

**PSY 757. Seminar in Selected Topics in Clinical Psychology (1-3)**

Prerequisites: Consent of master's program adviser.

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 master's program 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 master's program adviser.

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 master's program adviser. Maximum credit six units applicable to a master's degree.

**PSY 761. Seminar in Ethology and Comparative Psychology (3)**

Prerequisites: Biology 354 and consent of master's program 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 master's program 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 (1-3)**

Prerequisites: Psychology 670A-670B or 770A-770B and consent of instructor.

Advanced, specialized statistical topics for psychological researchers. Examples include clustering (cluster analysis, multi-dimensional scaling), causal modeling (using LISREL or EQS), analysis of categorical data (emphasizing loglinear and logit models), nonparametric statistics, and analysis of quasi-experimental designs.

**PSY 790. Practicum in the Teaching of Psychology (1) Cr/NC/RP**

Prerequisites: 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.

Prerequisites: 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)**

Prerequisites: Advanced master's and doctoral standing 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. Maximum combined credit of six units of 696 and 796 applicable to a master's degree.

**PSY 797. Research (1-3) Cr/NC/RP**

Prerequisites: Consent of master's program adviser.

Research in one of the fields of psychology. Maximum combined credit of six units of 797 and 798 applicable to a master's degree.

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

Prerequisites: Consent of master's program 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**

Prerequisites: 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 doctoral program or approval by instructor and program director.

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 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.

Prerequisites: 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)**

Prerequisite: Admission to 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 886. Selected Topics in Psychology for Doctoral Program (1-4)**

Prerequisites: Admission to doctoral program, post-doctoral standing in psychology or a related field, and consent of instructor.

Intensive study in specific areas of psychology for the doctoral program. Maximum combined credit of six units of 796 and 886 applicable to a doctoral program.

**PSY 894. Clinical Internship (3-15) Cr/NC/RP**

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)**

Prerequisites: Admission to the doctoral program.

Supervision of advanced intervention strategies applied to clinical populations.

**PSY 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisites: Admission to the doctoral program.

Independent investigation in the general field of the dissertation.

**PSY 898. Doctoral Special Study (1-8) Cr/NC/RP**

Prerequisites: 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 (P A)**

*In the School of Public Affairs*

*In the College of Professional Studies and Fine Arts*

**UPPER DIVISION COURSES**

**P A 510. Intergovernmental Relations in the United States (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Public Administration 310.

Processes of decision making in the management of urban communities.

**P A 525. The U.S. City Planning Process (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

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 580. Comparative Public Administration (3)**

Prerequisites: Public Administration 301.

Administrative organization and process of selected foreign and American governments. Analysis of the cultural basis of administrative systems.

**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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)  
(Offered only at IVC)**

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)**

Prerequisites: 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)**

Prerequisites: 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: Graduate standing.

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: Graduate standing.

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: Graduate standing.

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: Graduate standing.

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: Graduate standing.

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 686. Seminar in Data Sources and Policy Analysis on the U.S./ Mexico Border (3)**

Prerequisites: Public Administration 682.

Data resources and methodologies for conducting research and policy analysis related to local and regional governance of U.S./ Mexico border area.

### **P A 687. Seminar in Comparative Urban Planning: Mexico and U.S. (3)**

Prerequisites: Public Administration 686.

Comparative analysis of urban planning and design in Mexico and the U.S. with focus on historical, constitutional, cultural, and political aspects of planning in both countries.

### **P A 688. Seminar in Organization Theory: Comparative Application (3)**

Prerequisites: Public Administration 682.

Traditional and contemporary theories of public organizations, including organizations that foster transborder relationships; analysis of organizations through cross-cultural lens of organization theory; application of theories to improve organizational strength across borders.

### **P A 689. Seminar in Special Topics of the Border Region (3)**

Prerequisites: Public Administration 682.

Issues concerning border region (Mexico and U.S.). Topics include community revitalization, societal health, and immigration. Course addresses comparative relationships and conflicts inherent in border politics.

### **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**

Prerequisites: Consent of instructor.

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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

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## Public Health (P H)

*In the College of Health and Human Services*

### GRADUATE COURSES

#### **P H 601. Epidemiology (3)**

Prerequisites: Consent of instructor.

Distribution and determinants of diseases; role of epidemiology in public health. Descriptive, analytic and experimental epidemiology.

#### **P H 602. Biostatistics (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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 624. Emergency Preparedness and Response (3)**

Prerequisites: Classified graduate standing.

Major biopreparedness activities and responses within US public health system, and San Diego County in particular. Recognize and shape responses, conduct interviews and analyses, and interpret information related to a cluster of disease or unusual disease occurrence. Concepts of disaster medicine.

#### **P H 625. Control of Infectious Diseases (3)**

Prerequisites: Public Health 621.

Theoretical and practical experience in techniques available for control of infectious diseases.

**P H 626. International Health Epidemiology Practicum (3)**

One lecture and two hours of activity.

Prerequisites: Public Health 601 and 602.

Integrated public health experience with US and Mexican graduate student and faculty teams, culminating with four days in Mexico. International public health projects in underserved indigenous populations.

**P H 627. Advanced Statistical Methods in Public Health (3)**

Prerequisites: 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)**

Prerequisites: 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 environmental hazards in areas of food protection and vector control, solid waste, and community issues.

**P H 635. Environmental and Disaster Medicine (3)**

Etiology, diagnosis of disease, and stress in the modern global environment. Detection and control of intentional biological, chemical disasters, and nuclear threats.

**P H 636. Hazardous Waste Management (3)**

Prerequisites: 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.

Prerequisites: 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.

Prerequisites: Public Health 604 or 634.

Human health problems associated with water usage and with various aquatic environments.

**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 644. Health Services Organization and Management (3)**

Prerequisites: Credit or concurrent registration in Public Health 641.

Structure and functioning of organizations that provide and finance health services using a systems theory approach to visions/goals, strategies, structure, and processes. Functions of managers in healthcare organizations, focusing on interpersonal, informational, decision, ethical, and conflict resolution roles. (Formerly numbered Public Health 644A.)

**P H 645. Health Economics (3)**

Prerequisites: 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 647. 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. (Formerly numbered Public Health 647A.)

**P H 648. Health Policy (3)**

Prerequisites: Credit or concurrent registration in Public Health 641.

History and future of health policy. Research on major health policy issues including economic, social, ethical, and political forces that influence priorities and decisions. Role of government and private sector in health care.

**P H 649. Public Health Surveillance (3)**

Prerequisites: Public Health 601 and 602.

Data sources for border and global surveillance, including hospital system syndromic data. Methods of data quality control, data analysis, and alerting and communication of information.

**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.

- A. Epidemiology
- C. Occupational Health
- D. Environmental Health
- E. Health Services Administration
- F. Health Promotion

**P H 661. Theoretical Foundations of Health Promotion (3)**

Prerequisites: Public Health 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)**

Prerequisites: Public Health 303.

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)**

Prerequisites: Public Health 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)**

Prerequisites: Graduate standing in public health.

Philosophical, ethical and methodological issues in current health promotion research and services.

**P H 670. Public Health Law and Ethics (3)**

Public health action, defined by law, includes interface of individual and property rights with public health. Modern public health issues, extended to non traditional areas of injury prevention, AIDS, weapons of mass destruction, and historical scenarios.

**P H 682. Geographic Information Systems and Public Health Spatial Analysis (3)**

Two lectures and two hours of activity.

Prerequisites: Public Health 601 and 602.

Theoretical concepts of geographic information systems (GIS) and applications of GIS in public health. ArcGIS 9 software to illustrate the capabilities and uses of GIS in both academic research and regulatory decision making.

**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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**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
- E. Health Services Administration
- F. Health Promotion
- G. 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 723. Genetic Epidemiology (3)**

Prerequisites: Public Health 601 and 602.

Epidemiological approaches used to uncover genetic risk factors for common, complex diseases. Concepts include: inheritance and molecular genetics, the genetic component in disease, family-based and case-control genetic studies, haplotype determination, linkage disequilibrium, population stratification, and gene-environment interaction.

**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)**

Prerequisites: 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 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 735. Industrial Ventilation (3)**

Two lectures and three hours of laboratory.

Prerequisites: 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)**

Prerequisites: 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.

Prerequisites: 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)**

Prerequisites: 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 742A. Health Services Financial Management (3)**

Prerequisite: Graduate standing in public health.

Financial reporting statement including balance sheet and income statement. Financial management indicators including discounted cash flow analysis, long-term debt financing, equity valuation, risk and return, capital budgeting, financial forecasting, and short-term financing.

**P H 742B. Health Insurance and Financing Systems (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. Hospital and Ambulatory Systems Management (3)**

Prerequisites: Public Health 644.

Organization and management of hospitals, integrated healthcare systems, medical group practices, and other ambulatory or outpatient facilities. Emphasis on service provision, programs, and plans. San Diego regional healthcare organizations highlighted.



**P H 745. International Health Policy (3)**

Prerequisites: Public Health 641 and 648.

International health policy among economically and culturally diverse populations. Globalization, governance mechanisms, international agreements, and current health issues. Comparisons among industrialized nations and emphasis on plight of impoverished countries.

**P H 747. Quality Improvement and Program Evaluation (3)**

Prerequisites: Public Health 647.

Health services quality measurement and improvement to include quality systems policy and management; outcomes and performance measurement; process quality improvement methods; program evaluation methods; development of evidenced-based practices and electronic medical records; and administrative databases. (Formerly numbered Public Health 647B.)

**P H 748. Health Services Competitive Strategy and Marketing (3)**

Prerequisites: Public Health 644.

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.

- A. Epidemiology
- C. Occupational Health
- D. Environmental Health
- E. Health Services Administration
- F. Health Promotion

**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 780. Global Health I (3)**

Prerequisites: Public Health 601 and 602.

Principles of global health. Challenges of urbanization and migration to include demography; main causes of morbidity and mortality, including infectious agents; reproductive health; cultural diversity; and global preparedness.

**P H 781. Global Health II (3)**

Prerequisites: Public Health 601, 602, 780.

Global health to include trends and impacts of chronic physical and mental disease; infectious diseases of global importance; nutritional status and disease patterns; resource constrained environments, and design of international health organizations and systems.

**P H 783. Infectious Diseases in a Resource Constrained Environment (3) Cr/NC**

One lecture and four hours of laboratory.

Prerequisites: Public Health 601 and 602.

Integrated public health experience with US and West Indies graduate students and faculty, culminating with fieldwork in Jamaica. Problem-solving skills for infectious disease ecology, surveillance, and control in resource-constrained settings.

**P H 784. Global Environmental Health (3)**

Prerequisites: Public Health 601 and 604.

Environmental causes of morbidity and mortality worldwide and strategies to reduce incidence. Regional differences due to anthropogenic and naturally occurring disease agents interacting with differential population susceptibility to disease. Measurement tools for environmental health research in less developed areas of the world.

**P H 797. Research (1-3) Cr/NC/RP**

Prerequisites: 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 (1-6) Cr/NC/RP**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

**P H 800. Seminar (1-9)**

Prerequisites: 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 826. Analysis of Case-Control Studies (3)**

Prerequisites: Public Health 623 and 627.

Statistical methods and applications for analyzing case-control studies. Use of conditional and unconditional logistic regression and approaches for incorporating confounding and interaction in models. Computer applications included.

**P H 827. Analysis of Cohort Studies (3)**

Prerequisites: Public Health 623 and 627.

Statistical models for analyzing cohort studies including general regression methodology, generalized linear models, generalized estimating equations, random effects models and survival analysis. Emphasis on conceptual understanding of these models, implementation with statistical software, and interpretation.

**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)**

Prerequisites: Public Health 663, admission to the doctoral program, and consent of instructor.

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)**

Prerequisites: Admission to the doctoral program and consent of instructor.

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 867. Seminar: Grantwriting for Health Behavior Researchers (3)**

Prerequisite: Admission to Ph.D. in public health with a concentration in health behavioral science.

Skills needed to compete for health behavior research funding. Grant proposal writing, submission, review, and revision processes. Background information about grant review procedures and funding mechanisms, with emphasis on national institutes of health.

**P H 880. Seminar: Program Planning and Evaluation in International Settings (3)**

Prerequisites: Public Health 780.

Theory and skills to evaluate research and service programs in international settings to include methods in program planning and evaluation, distinctions between research and evaluation, special considerations in cross-cultural settings, and transadaptation of planning and evaluation materials.

**P H 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisites: 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**

Prerequisites: 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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## **Recreation and Tourism Management (RTM)**

*In the School of Hospitality and Tourism Management  
In the College of Professional Studies and Fine Arts*

**UPPER DIVISION COURSE**

**RTM 575. Designing Recreation and Park Areas and Facilities (3)**

Prerequisites: Recreation and Tourism Management 101.

Design principles and concepts applied to planning and development of park and recreation areas and facilities. (Formerly numbered Recreation 575.)

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## **Regulatory Affairs (R A)**

*In the College of Sciences*

**GRADUATE COURSES**

**R A 601. Pharmaceutical, Biotechnology, and Medical Device Industries (3)**

**(Offered only as a distance education course)**

Prerequisites: Chemistry 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.

**R A 602. Food and Drug Law (3)**

**(Offered only as a distance education course)**

Prerequisites: 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.

**R A 696. Advanced Topics in Regulatory Affairs (1-4)**

**(Offered only as a distance education course)**

Prerequisites: Regulatory Affairs 602.

Selected topics in regulatory affairs. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**R A 705. Project Planning for the Biomedical Industries (3)**

**(Offered only as a distance education course)**

Prerequisites: 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)**

**(Offered only as a distance education course)**

Prerequisites: 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)**

**(Offered only as a distance education course)**

Prerequisites: 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)**

**(Offered only as a distance education course)**

Prerequisites: 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)**

**(Offered only as a distance education course)**

Prerequisites: 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)**  
(Offered only as a distance education course)

Prerequisites: 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)**  
(Offered only as a distance education course)

Prerequisites: 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)**  
(Offered only as a distance education course)

Prerequisites: 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)**  
(Offered only as a distance education course)

Prerequisites: 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)**  
(Offered only as a distance education course)

Prerequisites: 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)**  
(Offered only as a distance education course)

Prerequisites: 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 781. Ethics for Healthcare Professionals (3)**  
(Offered only as a distance education course)

Prerequisites: Regulatory Affairs 602.

Ethical issues confronting healthcare professionals. Moral positions concerning impact on laboratory animals, human subjects, patients, and consumers, both on a case-specific level and as applied to field in general. Develop capacities to generalize, translate, and apply principles and ideas to modern biomedical practice.

**R A 783. Effective Communication for Healthcare Professionals (3)**  
(Offered only as a distance education course)

Prerequisites: Regulatory Affairs 601.

Written, oral, and interpersonal communication strategies for the business environment with emphasis on regulatory affairs.

**R A 797. Research (1-3) Cr/NC/RP**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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.

## Religious Studies (REL S)

*In the College of Arts and Letters*

### UPPER DIVISION COURSES

**REL S 530. Religion and Revolution (3)**

Prerequisites: 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 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)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### GRADUATE COURSES

**REL S 696. Seminar in Selected Topics (3)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**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.

## Rhetoric and Writing Studies (RWS)

In the College of Arts and Letters

### UPPER DIVISION COURSES

#### RWS 500W. Advanced Writing Strategies (3)

Prerequisites: Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units; completed Writing Proficiency Assessment with a score of 8 or higher (or earned a C or higher in RWS 280, 281, or LING 281 if score on WPA was 7 or lower); and completed General Education requirements in Composition and Critical Thinking. **Proof of completion of prerequisites required:** Test scores or verification of exemption; copy of transcript.

Advanced writing course focusing on how meaning is negotiated and claims are argued in academic and public discourse.

#### RWS 501. Editing (3)

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 503. Professional Writing (3)

Prerequisite: Rhetoric and Writing Studies 305W or 500W.

Principles and practices of professional writing, including clear and concise style and rhetorical strategies of designing effective workplace documents. Practice composing memos, reports, proposals. (Formerly numbered Rhetoric and Writing Studies 503W.)

#### RWS 504. Advanced Professional Writing (3)

Prerequisites: Rhetoric and Writing Studies 503. Recommended: Graphics or drawing course.

Advanced principles in professional writing, including user and task analysis for interface design; document design and typography; collaboration and interpersonal communication; ethical and cultural issues; usability testing; and small group management.

#### RWS 505. Writing Project Management (3)

Prerequisites: Rhetoric and Writing Studies 503 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 605.)

#### RWS 506. Writing Internship (3) Cr/NC

Prerequisites: Consent of instructor and successful completion of a 500-level writing course with a grade of B or better.

Intensive experience in writing and editing documents while student is under the joint supervision of an academic instructor and a professional coordinator.

#### RWS 507. Professional Communication in Nonprofit Organizations (3)

Prerequisites: Rhetoric and Writing Studies 503.

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; completed Writing Proficiency Assessment with a score of 8 or higher (or earned a C or higher in RWS 280, 281, or LING 281 if score on WPA was 7 or lower); and completed General Education requirements 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, proposal, conference presentation. Adhering to standards and regulations. (Formerly numbered Rhetoric and Writing Studies 508.)

#### RWS 509. Teaching Composition in Secondary Schools (3)

Prerequisites: Consent of instructor based on writing sample and/or test.

Theory and practice of teaching and assessing composition in secondary schools and comparable contexts.

#### RWS 510. Rhetoric and Culture (3)

Interplay of rhetoric, writing, and culture, including race/ethnicity, gender, class, and other cultural considerations. Role of texts in shaping and shifting community knowledge, identity, norms, and values.

#### 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)

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

#### RWS 599. Special Study (1-3) Cr/NC

Directed individual study. Maximum credit six units.

### GRADUATE COURSES

#### RWS 600. Reading and Writing Rhetorically (3)

Theoretical frameworks, including rhetorical theory and discourse analysis, for analyzing and interpreting academic, professional, and everyday texts. Critical reading and writing of texts and rhetorical dimensions of knowledge production.

#### RWS 601A. History of Rhetoric I (3)

Prerequisites: 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.

#### RWS 601B. History of Rhetoric II (3)

Prerequisites: 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 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. 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.

**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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**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 750. 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 790. M.A. Examination Preparation (3) Cr/NC**

Prerequisites: Twenty-four units of graduate coursework that counts toward the M.A. degree in rhetoric and writing studies. Student must be in final semester of study for master's degree.

Survey of selected essays, articles, and texts in rhetoric, composition studies, and professional and technical writing included in the M.A. examination. Emphasis on rhetorical analysis of texts and contexts (historical, social, professional, and technical). Strongly recommended for students taking the M.A. examination.

**RWS 796A. Teaching Internship (3) Cr/NC**

Prerequisites: 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) Cr/NC**

Prerequisites: Rhetoric and Writing Studies 501, 503, 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**

Prerequisites: 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**

Prerequisites: 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.

**RWS 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisites: 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. Registration in 799C limited to two semesters.

**Russian (RUSSN)**

*In the Department of European Studies  
In the College of Arts and Letters*

**UPPER DIVISION COURSES**

**NOTE: All upper division courses in Russian are taught in Russian unless otherwise stated.**

**RUSSN 501. Translation (3)**

Prerequisites: Russian 301.

Comparison of Russian and English through translation of a variety of texts from Russian to English and from English to Russian.

**RUSSN 570. Issues in Russian Literary and Cultural Studies (3)**

Prerequisites: Russian 301 and 305A or 305B.

Themes within literary, intellectual, and cultural movements in Russian literature of the nineteenth to twenty-first centuries. May be repeated with new title and content. See *Class Schedule* for specific content. Maximum credit six units.

**RUSSN 596. Topics in Russian Studies (3)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES**

**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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**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.

**Social Work (SWORK)**

*In the College of Health and Human Services*

**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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES**

**SWORK 601. Seminar in Social Welfare Policy and Services (3)  
(Selected sections offered as distance education)**

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)**

Prerequisites: 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)**

Prerequisites: 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 670. Social Work Foundation Practice Skills (3)**

Prerequisite: Admission to advanced standing program.

Skill development and application of social work practice. Engagement, assessment, risk assessment, application of theoretical models to client interventions.

### **SWORK 671. Generalist Foundation of Social Work Practice, Policy, and Human Behavior (3)**

Prerequisite: Admission to advanced standing program.

Reviews generalist foundation of social work curriculum. Practice concepts at all practice levels, human development theories, and social welfare policies.

### **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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### **SWORK 702. Seminar in Selected Social Welfare Policy and Services (3)**

Prerequisites: 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.

### **SWORK 720. Seminar in Selected Topics in Human Behavior and Social Environment (3)**

Prerequisites: 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)**

Prerequisites: Social Work 631, 632, and concurrent registration in Social Work 750B.

Human services program design and core managerial processes and techniques including program design, management information systems, organizational performance management, financial management, human resource management, and development of grant proposals.

### **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)**

Prerequisites: Social Work 740 and concurrent registration in Social Work 750B.

Study of a selected aspect of social work management in human services. Strategic planning and management, marketing, leadership of human service organizations, organizational performance, management audits, organizational change management, and supervision. 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)**

Prerequisites: 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.

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

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

**Sociology (soc)**

*In the College of Arts and Letters*

**UPPER DIVISION COURSES****SOC 522. The Family in Comparative and Cross-Cultural Perspectives (3)**

Prerequisites: 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)**

Prerequisites: 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 537. Political Sociology (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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 554. United States-Mexico Transborder Populations and Social Change (3)  
(Same course as Chicana and Chicano Studies 554)**

Prerequisites: Sociology 101. Recommended: Chicana and Chicano Studies 355 and/or Sociology 350.

Sociology of the population at the United States-Mexico border region. Demographic dynamics and social change in border communities. International migration and transmigration. Transborder families and transnational families. Gender systems and women's reproductive health in border communities.

**SOC 555. Immigrants and Refugees in Contemporary American Society (3)**

Prerequisites: 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)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**SOC 597. Investigation and Report (3)**

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)**

Prerequisites: 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. Focus on classical 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 605. Contemporary Sociological Theory (3)**

Prerequisites: Graduate standing and Sociology 401.

Examination and analysis of original works in modern/postmodern sociological theory.

**SOC 607. Advanced Quantitative Methods (3)**

Prerequisites: Sociology 602.

Methods used in current sociological research, including evaluation of reported findings. Research designs appropriate to particular types of projects. Evaluation of research in progress. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree. (Formerly numbered Sociology 760.)

**SOC 608. Advanced Qualitative Methods (3)**

Prerequisites: Undergraduate upper division general methods, undergraduate qualitative methods, graduate general methods.

Data collection, analysis, and reporting in qualitative research. Inductive and interpretive research to ethnographic field notes and interviews to find patterns in social fabric expressing life-worlds.

**SOC 695. Topics in Directed Readings (3)**

Prerequisites: 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)**

Prerequisites: Graduate standing.

Intensive study in specific areas of sociology. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**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 710. Teaching Sociology (3)**

Prerequisites: Graduate standing.

Techniques of lecturing, leading student-centered exercises, evaluation, teaching from a multicultural perspective, and other pedagogical skills related to teaching sociology at the college level. Development of teaching portfolios and course materials including syllabi, examinations, and writing assignments.

**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 790. Directed Readings in Sociology (3) Cr/NC**

Prerequisite: Advancement to candidacy.

Preparation for the comprehensive examination for students in Plan B.

**SOC 796. Field Practicum (3) Cr/NC**

Prerequisites: Sociology 601 and 602.

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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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.

**SOC 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisites: 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. Registration in 799C limited to two semesters.

**Spanish (SPAN)**

*In the Department of Spanish and Portuguese Languages and Literatures*

*In the College of Arts and Letters*

**UPPER DIVISION COURSES**

**NOTE: All upper division courses in Spanish are taught in Spanish unless otherwise stated.**

**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 503. Literature of Baja California (3)**

Prerequisites: Spanish 406A-406B.

Diachronic overview of Baja California literature in its different genres. Cultural phenomenon of the border nation, in which the Californias are vital.

**SPAN 504. Don Quixote (3)**

Prerequisites: Spanish 405A.

A close reading of Cervantes' novel *Don Quixote*, Parts I and II. (Formerly numbered Spanish 620.)

**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)**

Prerequisites: 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.



**SPAN 561. Methods in Teaching Spanish as a Second Language (3)**

Prerequisites: Spanish 350 or 448.

Teaching of Spanish as a second language: contemporary theory and methods. Not open to students with credit 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)**

Prerequisites: 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)**

Prerequisites: Spanish 302 or 381.

Topics in Spanish or Spanish American language, literature, culture and linguistics. May be repeated with new content. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES**

**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)**

Prerequisites: Two upper division literature courses in Spanish.

Critical issues in Hispanic literary theory. Emphasis on contemporary theory: structuralism, post-structuralism, feminism, cultural studies, and gay and lesbian studies.

**SPAN 602. Foundations and Research Methods of Hispanic Linguistics (3)**

Prerequisites: Spanish 448.

Morphology, phonology, syntax of Spanish in historic and regional varieties. Qualitative and quantitative research related to sociolinguistics and pragmatics of Spanish, language acquisition, bilingualism, contact varieties. Spanish in teaching and translation.

**SPAN 603. Spanish Literature: Ninth to Seventeenth Century (3)**

Prerequisite: Spanish 405A.

Philosophical, political, and aesthetic ideas in Spanish literature spanning ninth through seventeenth centuries. Medieval, Renaissance, and Baroque periods. Writers include Luis de Gongora, Calderon de la Barca, and Lope de Vega.

**SPAN 604. Spanish Literature: Eighteenth to Twentieth Century (3)**

Prerequisite: Spanish 405B.

Philosophical, political, and aesthetic ideas in literature of neoclassicism, romanticism, realism, and modernism from eighteenth through twentieth centuries. Writers include Jose Cadalso, Emilia Pardo Bazan, Federico Garcia Lorca, Antonio Buero Vallejo, and Lidia Falcon.

**SPAN 605. Latin American Literature: 1492 to 1880 (3)**

Prerequisite: Spanish 405B.

Latin American literature from fifteenth to late nineteenth century. Emphasis on novel and poetry. Baroque, neoclassicism, romanticism, realism, and naturalism movements. Socio-cultural environment from different critical and theoretical perspectives.

**SPAN 606. Latin American Literature: 1880 to Present (3)**

Prerequisite: Spanish 406B.

Development of Latin American literature in its artistic and ideological tendencies from 1880 to present. Literary movements include romanticism, realism, modernism, criollismo, indigenism, feminism/post-feminism, neomarxism, and postmodernism. Focus on short stories and drama.

**SPAN 609. History of the Spanish Language (3)**

Prerequisites: 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.

**SPAN 611. Advanced Topics in Spanish Linguistics (3-6)**

Prerequisites: Spanish 448 or 602.

Specific aspect of Spanish descriptive, historical, or theoretical linguistics. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

**SPAN 612. Seminar in Spanish Discourse Analysis (3)**

Prerequisites: Spanish 448 or 602.

Analysis of oral discourse in Spanish. Basic readings in field and strategies to collect and analyze data.

**SPAN 630. Golden Age Drama (3)**

Prerequisites: Spanish 405A or 601.

The works of Lope de Vega and Calderon among others.

**SPAN 631. Spanish Women Writers (3)**

Prerequisites: 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)**

Prerequisites: 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 681. Spanish/Spanish American Dialectology (3)**

Prerequisites: 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)**

Prerequisites: 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 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### **SPAN 750. Seminar in Spanish American Literature (3)**

Prerequisites: 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, Film, and Society (3)**

Prerequisites: Spanish 406B or 601.

Works of representative authors and cultural production 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)**

Prerequisites: Spanish 448 or 602.

The application of linguistic theory to the teaching of Spanish at the secondary and college levels.

### **SPAN 781. Spanish Language Testing (3)**

Prerequisites: 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)**

Prerequisites: Spanish 448 or 602.

Advanced study of the grammatical structures of Spanish.

### **SPAN 792. Spanish Language and Society (3)**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

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## Special Education (SPED)

*In the College of Education*

### UPPER DIVISION COURSES

#### **SPED 500. Human Exceptionality (3)**

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) Cr/NC**

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)**

Prerequisites: Admission to credential program.

Educational needs and services for students with serious emotional disturbance. Classroom interventions and procedures.

#### **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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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 530. Issues in Autism (2)**

Definition, etiology, assessment, and instructional practices used to address autism. Historical and current issues.

**SPED 534. Classroom Assessment of Students with Mild/Moderate Disabilities (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Specialized study of selected topics in special education. May be offered as either a workshop or lecture/discussion. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES****SPED 600. Classroom Adaptations for Special Populations (3)**

Prerequisites: Preliminary multiple or single subject teaching credential.

Strategies for adapting curriculum, differentiating instruction, meeting social and behavioral needs. Modifying assessments for students with disabilities and students with gifts and talents in general education classrooms. Applicable to the Teacher Induction Certificate Program. Not acceptable on a master's degree.

**SPED 605. Advanced Behavioral and Health Supports (1)**

Prerequisites: 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)**

Prerequisites: 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. Preschoolers (3)**

Prerequisites: 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)**

Prerequisites: 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 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 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, 650D applicable to a master's degree.

- A. Consultant Skills/Multidisciplinary Teams
- B. Affective and Social Development
- D. Instructional Programming

**SPED 651. Legislation, Leadership, and Management for Special Education Services (3)**

Prerequisites: 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 653. Advanced Instruction, Collaboration, and Consultation in Special Education (2)**

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 (2)**

Prerequisites: 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)**

Prerequisites: 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 656. Developing Social Interaction and Play Skills (1)**

Developing social and play skills for young children and students with moderate to severe disabilities with emphasis on evidence-based practices.

### **SPED 657. Facilitating Transition Across Environments in Special Education (1)**

Facilitating transition for individuals with disabilities across activities, instructors, and settings including transition to employment.

### **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)**

Prerequisites: 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)**

Prerequisites: 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 676. Advanced Applied Behavior Analysis (3)**

Prerequisites: Special Education 553.

Ethical application of research-based strategies based on behavior analysis. Emphasis on arranging learning opportunities to increase student skills and data collection.

### **SPED 681. Advanced Studies in Special Education (3)**

Prerequisites: 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 685. Single Case Research Design (3)**

Prerequisite: Special Education 553.

Single-case research designs focused on interventions with individuals with disabilities.

### **SPED 696. Advanced Topics in Special Education (3)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### **SPED 771. Directed Internship: Special Education (1-4) Cr/NC**

Prerequisites: 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**

Prerequisites: 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

### **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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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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## Speech, Language, and Hearing Sciences (SLHS)

In the College of Health and Human Services

### 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.

#### SLHS 511. Pediatric Aural Rehabilitation (3)

Prerequisites: Speech, Language, and Hearing Sciences 305, 320, 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.

#### SLHS 512. Phonological Acquisition and Disorders (3)

Prerequisites: 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.

#### 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.

#### 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.

#### SLHS 521. Speech-Language Screening of Children (1) Cr/NC

Four hours of supervision.

Prerequisites: Clinic clearance.

Screening speech and language of children in various community facilities and settings.

#### SLHS 522. Speech-Language Screening of Adults (1)

Four hours of supervision.

Prerequisites: Clinic clearance.

Screening speech and language of adults in various community facilities and settings.

#### SLHS 525. Clinical Processes (1-2)

Prerequisites: Consent of instructor.

Clinical issues, policies, and methods in speech-language pathology. Experience in writing lesson plans and clinical reports. Clinical observation to partially fulfill requirements for certification. Maximum credit five units.

#### 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.

#### SLHS 546. Clinical Practice with Aural Rehabilitation (0.5)

Two hours of supervision.

Prerequisites: Grade of C or better in Speech, Language, and Hearing Sciences 511 and a minimum of two units in Speech, Language, and Hearing Sciences 525.

Supervised practicum in aural rehabilitation. One unit represents two hours of clinical contact and one hour of staffing per week.

#### SLHS 550. Education of Deaf Children and Youth (3)

Prerequisites: Speech, Language, and Hearing Sciences 350.

Educational programs, services and resources for learners who are deaf; historical background, philosophy, sociological and psychological problems.

#### 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 101, 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.

#### SLHS 558. ASL Structure and Acquisition (3)

Prerequisites: Speech, Language, and Hearing Sciences 201 and 350.

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.

#### SLHS 562. Oral Communication for Children Who Are Deaf or Hard-of-Hearing (3)

Prerequisites: 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.

#### SLHS 570. Dysphagia (3)

Prerequisites: Speech, Language, and Hearing Sciences 321.

Measurement techniques and research in dysphagia. Assessment and treatment of dysphagia and swallowing problems in children and adults.

#### SLHS 580. Communication Processes and Aging (3)

Prerequisites: Twelve upper division units in an appropriate major.

Normal and disordered communication processes in the aging.

#### 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.

#### SLHS 596. Selected Topics in Speech, Language, and Hearing Sciences (1-4)

Prerequisites: 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. May be repeated with new content. 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### GRADUATE COURSES

#### **SLHS 600. Research Methods in Communication Sciences and Disorders (3)**

Prerequisites: Consent of instructor.  
Methods, evaluation, and exposition of research in communication sciences and disorders.

#### **SLHS 601. Speech-Language Science Instrumentation and Applications (2)**

Prerequisites: Consent of instructor.  
Instrumentation and measurement techniques in speech and language science and disorders.

#### **SLHS 603. Neuroscience of Speech and Language (2)**

Prerequisites: Consent of instructor.  
Basic neuroanatomy and neurophysiology of speech, language, and related cognitive systems.

#### **SLHS 605. Fluency and Fluency Disorders (2)**

Prerequisites: Consent of instructor.  
Theory, diagnosis, and treatment of fluency disorders in children, adolescents, and adults.

#### **SLHS 606. Voice and Resonance Disorders (3)**

Prerequisites: Consent of instructor.  
Normal voice mechanism, symptoms and cause of voice and resonance disorders and their management.

#### **SLHS 607. Phonology and Phonological Disorders (3)**

Prerequisites: 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.

#### **SLHS 608. Acquired Neuromotor Speech Disorders (3)**

Prerequisites: Consent of instructor.  
Theories and clinical methods of diagnosis and intervention pertaining to motor speech disorders (dysarthria and apraxia of speech) in adults.

#### **SLHS 609A. Acquired Neurogenic Language and Cognitive Disorders I (3)**

Prerequisites: 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.

#### **SLHS 609B. Acquired Neurogenic Language and Cognitive Disorders II (3)**

Prerequisites: 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)**

Prerequisites: 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.

#### **SLHS 614. Language Disorders: School Age Through Adolescence (3)**

Prerequisites: 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.

#### **SLHS 617. Diagnostic Methods in Speech-Language Pathology (3)**

Prerequisites: 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 618A. Diagnostic Practicum in Speech-Language Pathology: Pediatrics (1)**

Four hours of supervision.  
Prerequisites: Speech, Language, and Hearing Sciences 600 or 601, 603, 607, 613, 617, and two units of 525.  
Supervised clinical practice in diagnostic methods with pediatric clients. Maximum credit six units.

#### **SLHS 618B. Diagnostic Practicum in Speech-Language Pathology: Adults (1)**

Four hours of supervision.  
Prerequisites: Speech, Language, and Hearing Sciences 600 or 601, 603, 607, 613, 617, and two units of 525.  
Supervised clinical practice in diagnostic methods with adult clients. Maximum credit six units.

#### **SLHS 619. Multidisciplinary Diagnostic Practicum in Speech-Language Pathology (1)**

Four hours of supervision.  
Prerequisites: Consent of instructor.  
Participation in multidisciplinary assessment of infants and toddlers.

#### **SLHS 626A. Pediatric Speech-Language Pathology (0.5)**

Two hours of supervision.  
Prerequisites: Speech, Language, and Hearing Sciences 600 or 601, 603, 607, 613, 617, and two units of 525.  
Supervised intervention practica with children. Up to two hours per week of client contact plus staffing. Up to three units may be taken concurrently. Maximum credit nine units. (Formerly numbered Speech, Language, and Hearing Sciences 626.)

#### **SLHS 626B. Neurogenic Speech-Language Intervention (0.5)**

Two hours of supervision.  
Prerequisites: Speech, Language, and Hearing Sciences 600 or 601, 603, 607, 613, 617, and two units of 525.  
Supervised intervention practica with adults with neurogenic communication disorders. Up to two hours per week of client contact plus staffing. Up to three units may be taken concurrently. Maximum credit nine units.

#### **SLHS 626C. Voice/Fluency/Dysphagia Clinical Intervention (0.5)**

Two hours of supervision.  
Prerequisites: Speech, Language, and Hearing Sciences 600 or 601, 603, 607, 613, 617, and two units of 525.  
Supervised intervention practica with voice, fluency, and/or swallowing disorders. Up to two hours per week of client contact plus staffing. Up to three units may be taken concurrently. Maximum credit nine units.

#### **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.  
Prerequisites: 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 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.

#### **SLHS 656. Advanced Clinical Practice with Learners Who are Deaf or Hard-of-Hearing (1) Cr/NC**

Three hours of laboratory.  
Prerequisites: 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.

**SLHS 657. Assessment of Learners Who are Deaf or Hard-of-Hearing (3)**

Prerequisites: 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.

**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.

**SLHS 659. Seminar in Education of Deaf-Blind Children and Youth (3)**

Prerequisites: 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.

**SLHS 668. Multicultural Issues in Deafness (3)**

Prerequisites: 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.

**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.

**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.

**SLHS 675. Augmentative Communication (2)**

Prerequisites: Consent of instructor.

Alternative and augmentative approaches, strategies and technology for individuals with severe communication impairments. Assessment and intervention. Project required.

**SLHS 676. Assistive Device Assessment Program for Communicatively Handicapped (2)**

Prerequisites: Consent of instructor.

Assessment of communication skills of disabled individuals, environmental needs and appropriateness of augmentative communication aids. Remediation recommendations. Maximum credit four units.

**SLHS 696. Selected Topics in Speech, Language, and Hearing Sciences (1-3)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**SLHS 707. Seminar in Phonological Acquisition (3)**

Prerequisites: 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 750. Seminar in Language, Cognition, and the Brain: Sign Language Perspectives (3)**

Prerequisites: Consent of instructor.

Sign language and deafness research applied to theoretical models of language representation and processing, language acquisition, bilingualism, and the neural organization of language.

**SLHS 754. Seminar in Disorders of Speech Production (3)**

Prerequisites: 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)**

Prerequisites: Consent of instructor.

Current issues, theory, and research concerning language representation, processing, and neurological organization in adults and children.

**SLHS 793. Seminar in Disorders of Language and Cognition/Children (3)**

Prerequisites: 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.

**SLHS 794. Seminar in Language Disorders in Multilingual Populations (3)**

Prerequisites: Consent of instructor.

Language disorders in linguistically diverse populations. Disorders of phonological, morphological, syntactic, and semantic aspects of target languages and their clinical implications.

**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.

**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**

Prerequisites: 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**

Prerequisites: 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. Registration in 799C limited to two semesters.

**SLHS 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisites: Admission to the doctoral program.

Individual investigation to the general field of the dissertation.

### **SLHS 898. Doctoral Special Study (1-8) Cr/NC/RP**

Prerequisites: 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 617. 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.

### **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; post-baccalaureate 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).

### **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.

### **SLHS 963. Professional Seminar in Education of the Deaf, Level II (3)**

Prerequisites: Level I Education Specialist Credential: Deaf and Hard-of-Hearing. For Level II Hard-of-Hearing Credential program.

Topics in language acquisition and how these apply to DHH classrooms. Classroom ethnography and health and technology competencies.

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## Statistics (STAT)

*In the Department of Mathematics and Statistics  
In the College of Sciences*

### UPPER DIVISION COURSES

**NOTE: Statistics 550, 551A, or 551B are not acceptable on the Master of Science degree in Statistics.**

**Proof of completion of prerequisites required for all upper division courses: Copy of transcript.**

#### **STAT 510. Applied Regression Analysis (3)**

Prerequisites: 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.

#### **STAT 520. Applied Multivariate Analysis (3)**

Prerequisites: 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.

#### **STAT 550. Applied Probability (3)**

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)**

Prerequisites: 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)**

Prerequisites: Statistics 551A.

Point and interval estimation and hypothesis testing in statistical models with applications to problems in various fields.

#### **STAT 560. Sample Surveys (3)**

Prerequisites: 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.

#### **STAT 570. Stochastic Processes (3)**

Prerequisites: Statistics 551A.

Introduction to stochastic processes with selected applications.

#### **STAT 575. Actuarial Modeling (3)**

Prerequisites: 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 580. Statistical Computing (3)**

Prerequisite: Statistics 551B.

Machine computation in development, application, and evaluation of advanced statistical techniques. Floating arithmetic and algorithm stability; numerical methods for parameter estimation (including maximum likelihood) and multivariate probability integration; simulation and other computer-intensive statistical techniques.

#### **STAT 596. Advanced Topics in Statistics (1-4)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### GRADUATE COURSES

#### **STAT 670A-670B. Advanced Mathematical Statistics (3-3)**

Prerequisite: Statistics 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisite: Statistics 551A. Statistics 680A is prerequisite to 680B.

Design, conduct, and analysis of experimental and observational studies including cohort, survival, case-control studies. Multifactor screening. Biological assays.

**STAT 696. Selected Topics in Statistics (3)**

Prerequisites: Graduate Standing.

Intensive study in specific areas of statistics. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**STAT 700. Data Analysis Methods (3)**

Prerequisites: Statistics 510 and 551B or 670B.

Computationally intensive data analysis techniques including random and mixed effects models, repeated measures and longitudinal data analysis, generalized linear models, nonlinear models, and multilevel models.

**STAT 701. Monte Carlo Statistical Methods (3)**

Prerequisites: Statistics 551B or 670B.

Monte Carlo and simulation intensive methods for development and application of statistical methods such as Monte Carlo and Markov chain Monte Carlo algorithms and inferential procedures; stochastic optimization, EM algorithm, and variants for parameter estimation, importance sampling, variance reduction techniques.

**STAT 702. Data Mining Statistical Methods (3)**

Prerequisites: Statistics 551B or 670B.

Concepts and algorithms of data mining techniques such as decision trees and rules for classification and regression, clustering, and association analysis.

**STAT 720. Seminar (1-3)**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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**

Prerequisites: 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.

**STAT 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisites: 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. Registration in 799C limited to two semesters.

## Teacher Education (TE)

In the College of Education

### 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 525. Discipline and Classroom Management (3) (Offered only at IVC)

Prerequisites: Six upper division units in education, psychology or sociology.

Analysis of research and theories of classroom discipline, management, and teaching effectiveness, with practical application to the elementary and secondary classroom setting.

#### TE 526. Teaching the Special Child in the Regular Classroom (3) (Selected sections offered as distance education)

Prerequisites: Teaching credential or admission to multiple or single subject credential programs.

Prepares general education teachers to adapt curriculum and instruction, differentiate instruction, meet social and behavioral needs, modify instruction for students with disabilities and for students who are gifted and talented. Not for multiple or single subject credential candidates. Not open to students with credit in Special Education 450 or 550, Teaching the Special Child in the Regular Classroom.

#### TE 530. Children's/Adolescents' Literature (3)

Survey of children's/adolescents' literature and its incorporation into the classroom curriculum.

#### TE 596. Topics in Teacher Education (1-3 or 6) RP\*

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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

\*Specified sections.

### GRADUATE COURSES

#### TE 600. Curriculum Development in Education (3)

Prerequisites: Consent of instructor.

Advanced study of the research in curriculum development, construction and evaluation.

#### TE 602A. Seminar: California Clear Teaching Credential (1) Cr/NC

Prerequisites: Preliminary multiple or single subject credential.

Develop a preliminary professional development plan designed to provide guidance for induction work linked to advanced study toward the California clear teaching credential. Explore links between preliminary credential work and ongoing professional development. Applicable to the Teacher Induction Certificate Program. Not acceptable on a master's degree.

#### TE 602B. Seminar: Assessing Professional Development Plan (1) Cr/NC

Prerequisites: Preliminary multiple or single subject credential and Teacher Education 602A.

Role of advanced study in induction coursework on professional development. Future professional development needs and plans outlined. Applicable to the Teacher Induction Certificate Program. Not acceptable on a master's degree.

#### 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)

Prerequisites: 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)

Prerequisites: 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)

Prerequisites: 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)

Prerequisites: 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 Literacy and Language Arts (3)

Prerequisites: Education 690.

Trends in reading instruction to include developmental sequences in reading skills and abilities, reading in the content fields, individual differences and interests.

#### 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 (\$)

Prerequisites: 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)

Prerequisites: 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.

#### 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. Advanced formal and informal literacy measures.

#### 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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 641. Teaching Foundational Skills of Early Writing to Primary Grade Children (3)**

Prerequisites: Valid multiple subjects teaching credential and experience teaching primary grade children.

Theoretical knowledge and practical skills in effective instructional frameworks for early writing instruction, intended to improve children's language development, phonemic awareness, letter knowledge, composing, sentence structure, punctuation, writing fluency, and spelling.

**TE 642. Teaching Text Structure and Genres for Early Writing in the Primary Grades (3)**

Prerequisites: Teacher Education 641, valid multiple subjects teaching credential, and experience teaching primary grade children.

Theoretical knowledge and practical skills in effective instructional frameworks for early writing instruction, intended to improve children's language development, composing, sentence, and text structure across a variety of genres.

**TE 643. Planning and Integrating Writing Instruction in the Primary Grades (3)**

Prerequisites: Teacher Education 641, valid multiple subjects teaching credential, and experience teaching primary grade children.

Theoretical knowledge and practical skills in planning an articulated primary grade writing program, integrating purposes and procedures of assessment with effective instructional frameworks and teaching writing for content area studies.

**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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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 677. Research-Based Pedagogy for Diverse Learners (3)**

Prerequisite: Admission to Master of Arts in Teaching program.

Research-based pedagogy for diverse learners. Instructional strategies applicable across disciplines.

**TE 693. Measuring and Assessing Student Achievement in Schools (3)**

Prerequisite: Admission to Master of Arts in Teaching program.

Development of assessments and tests common in instructional and research contexts. Uses and interpretation of assessment data in given differential social/political contexts. Implications for research and instruction.

### **TE 696. Selected Topics in Teacher Education (1-3)**

Prerequisites: Valid teaching credential.

Intensive study in specific areas of teacher education. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### **TE 736. Field Experience as a Reading Specialist (\$)**

Prerequisites: Eighteen units of core courses.

Individually designed practicum for the reading specialist.

### **TE 779. Action Research in Learning Environments (3)**

Prerequisites: Teacher Education 693 and successful completion of 24 units of Master of Arts in Teaching coursework.

Capstone course for Master of Arts in Teaching degree. Action research conducted in students' own teaching environments.

### **TE 790. Seminar in Teacher Education (3-6)**

Prerequisites: 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. For collaborative induction programs with school districts: May be taken prior to advancement to candidacy for six units; up to 12 units applicable to a master's degree. **For collaborative induction programs with school districts: May be taken prior to advancement to candidacy for six units; up to 12 units applicable to a master's degree.**

### **TE 798. Special Study (1-6) Cr/NC/RP**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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 954. Humanistic and Social Aspects of Teaching (1-4)**

Prerequisites: 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**

Prerequisites: 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/RP**

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/RP**

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 only at IVC)**

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 only at IVC)**

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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**Television, Film and New Media (TFM)**

*In the School of Theatre, Television, and Film  
In the College of Professional Studies and Fine Arts*

**UPPER DIVISION COURSES**

**TFM 510. Advanced 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.

**TFM 522. Advanced Film and Television Cinematography (3)**

Two lectures and three hours of laboratory.

Prerequisites: Television, Film and New Media 260 or 261 and 322. **Proof of completion of prerequisites required:** Copy of transcript.

Advanced theory and practice of cinematography for film and television production. Lighting for mood and character; camera movement for story telling; and new techniques in film, digital, and HD formats. Careers in the purely visual aspects of film making. (Not the same course as Television, Film and New Media 522 in the 2004-05 catalog and previous SDSU catalogs.)

**TFM 530. Selected Topics in Genre Studies for Television and Film (3)**

Prerequisite: Television, Film and New Media 320 or admission to television, film and new media graduate program.

Film and television genres (noir, western, comedy, musical, science fiction, soap opera, etc.) including key media texts, aesthetics, themes, history, and social context. May be repeated with new course content. See *Class Schedule* for specific content. Maximum credit six units.

**TFM 550. Art Direction for Television and Film (3)**

One lecture and four hours of activity.

Prerequisites: Television, Film and New Media 350; 260 or 261 for television, film and new media majors, and Theatre 440 for theatre majors, and consent of instructor. **Proof of completion of prerequisites required:** Copy of transcript.

Aesthetic, technical, and practical aspects of design for television and film. Experience in scenic design, graphics, set decoration, budgeting, and scheduling.

**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. Development of designs and analysis of technical requirements for fictional and nonfictional productions.

**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 565. Animated Film and New Media Techniques (3)**

Two lectures and more than three hours of activity.

Computer animation production and practical experience in digital postproduction 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.

**TFM 571. Selected Topics in Director Studies (3)**

Prerequisite: Television, Film and New Media 310.

Historical significance and theoretical approaches to major media directors (Welles, Hitchcock, Spielberg, etc.) including breadth of work, cultural and generic contexts, aesthetic innovation, and recurring themes. May be repeated with new content. See *Class Schedule* for specific topic. Maximum credit six units.

**TFM 573. Selected Topics in History of Film, TV, and Media (3)**

Prerequisite: Television, Film and New Media 310.

Media history including cultural and generic developments, patterns of exhibition, technological influences, significant creative and industrial figures, commercial and social contexts. May be repeated with new content. See *Class Schedule* for specific topic. Maximum credit six units.

**TFM 596. Selected Topics in Television, Film and New Media (1-4)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**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)**

Prerequisites: Admission to M.A. program.

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)**

Prerequisites: The equivalent of an undergraduate major in television, film, and new media production.

Standards for objective appraisal of the ethical and artistic aspects of television and film.

**TFM 660. Seminar in Dramatic and Documentary Forms in Television and Film (3)**

Prerequisites: Admission to M.A. program.

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 and admission to M.A. program.

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 761. Seminar: Selected Topics in Television, Film and New Media (3)**

Prerequisites: 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.

**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**

Prerequisites: 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 (THEA)

*In the School of Theatre, Television, and Film*

*In the College of Professional Studies and Fine Arts*

### UPPER DIVISION COURSES

**THEA 510. Creative Drama and Language Arts (3)**

Prerequisites: 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 523. Stage Combat (2)**

Four hours of activity.

Prerequisites: Theatre 332, 355, and by audition.

Skills and choreography of armed and unarmed stage combat. Performance application to selected scenes from world drama.

**THEA 525. Dramaturgy (3)**

Two lectures and three hours of activity.

Prerequisites: 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 530. Period Dress and Decor (3)**

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)**

Prerequisites: Theatre 332 and either Theatre 320 or 355.

Problems in characterization in contemporary drama, and in plays of Ibsen, Strindberg, Chekhov, and Shaw. Maximum credit six units.

**THEA 533A-533B. Theory and Styles in Acting and Directing I and II (3-3)**

Prerequisites: Theatre 332 and either Theatre 320 or 355.

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)**

Four hours of activity.

Prerequisites: Theatre 240B.

Rendering for scenic, costume, and lighting designer. Techniques, media, and portfolio preparation. Maximum credit four units.

**THEA 540. Scene Design II (3)**

Prerequisites: Theatre 440 and 530A or 530B.

History of scene design and application of contemporary styles to various types of dramatic production.

**THEA 541. Scene Painting (2)**

Four hours of activity.

Prerequisites: Theatre 530A or 530B.

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)**

Four hours of activity.

Prerequisites: 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)**

Four hours of activity.

Prerequisites: Theatre 545.

Computer aided drafting applications for theatre designer.

**THEA 547. Lighting Design II (3)**

Two lectures and three hours of laboratory.

Prerequisites: 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)**

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)**

One lecture and three hours of laboratory.

Prerequisites: Theatre 447.

Use of electrics for the stage. Lighting, sound, computer. Practical applications emphasized.

**THEA 550. Software for Theatrical Design (2)**

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 552. Costume Design II (3)**

Prerequisites: Theatre 452 and 530A or 530B.

Advanced studies in costume design. Emphasis on theatrical style, rendering layout, design problems, materials, and budget.

**THEA 554A. Costume Design Technology I (2)**

Four hours of activity.

Prerequisites: 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)**

Four hours of activity.

Prerequisites: 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 555A. Movement for the Theatre II (2)**

Four hours of activity.

Prerequisites: Theatre 332 and 355.

Movement techniques for the theatre. Movement patterns, phrase development, and partnering leading to scene work. Maximum credit four units. (Formerly numbered Theatre 555.)

**THEA 555B. Movement for the Theatre II (2)**

Four hours of activity.

Prerequisites: Admission to the MFA musical theatre program. Consent of instructor for undergraduates.

Musical theatre movement and dance styles. Maximum credit eight units.

**THEA 570. Practicum in Theatrical Production (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)**

Prerequisites: 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**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)**

Prerequisites: 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 620. Seminar in History of Musical Theatre (3)**

Prerequisite: Admission to M.F.A. musical theatre program.

Chronological survey of representative works from musical theatre history including major productions, personalities, styles, and genres. (Formerly numbered Theatre 520A-520B.)

**A.** Nineteenth Century Viennese Operetta through 1950

**B.** 1950 to Present

**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 622A-622B. History of Musical Theatre Laboratory (1-1) Cr/NC**

Three hours of laboratory.

Prerequisite: Admission to M.F.A. musical theatre program.

Laboratory component of Theatre 620A-620B. Theatre 622A must be taken concurrently with Theatre 620A; Theatre 622B must be taken concurrently with Theatre 620B. (Formerly numbered Theatre 521A-521B.)

**THEA 623. Seminar in Musical Theatre Script and Score Analysis (3)**

Prerequisites: Admission to M.F.A. musical theatre program.

Representative works from musical theatre analyzed in terms of dramatic and musical aesthetics.

**THEA 627. Musical Theatre Studio (4)**

Eight hours of activity.

Prerequisites: Admission to M.F.A. musical theatre program.

Acting, singing, and movement skills in relation to musical theatre performance. Maximum credit 16 units.

**THEA 630. Individual Vocal Instruction (1)**

Prerequisites: Admission to M.F.A. musical theatre program.

Individual voice instruction/coaching for students in M.F.A. musical theatre program. Maximum credit four units.

**THEA 642. Theatre Practicum Skills (1) Cr/NC**

Prerequisites: 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.

Prerequisites: 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)**

Prerequisites: Theatre 643.

Major set, costume, and lighting designers working in contemporary theatre, film, and television.

**THEA 645. Seminar in Theatrical Lighting (3)**

Prerequisites: 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)**

Prerequisite: 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)**

Prerequisites: 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)**

Prerequisites: Admission to M.F.A. musical theatre program.  
Study of choreographic styles of musical theatre.

### **THEA 659. Musical Theatre Stage Direction (3)**

Prerequisites: 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 790. Directed Readings in Theatre Arts (3) Cr/NC**

Prerequisites: Advancement to candidacy.

Preparation for the comprehensive examination for those students in the M.F.A. program under Plan B.

### **THEA 795. Practicum in Theatre Arts (1-6)**

Prerequisites: Theatre 600A.

Faculty supervised projects leading to public presentation. Maximum credit six units.

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

Prerequisites: 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**

Prerequisites: 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.

### **THEA 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisites: 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. Registration in 799C limited to two semesters.

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## Women's Studies (WMNST)

*In the College of Arts and Letters*

### UPPER DIVISION COURSES

#### **WMNST 512. Latinas in the Americas (3)**

Prerequisites: 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)**

Prerequisites: 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 520. Reproductive Rights and Justice (3)**

Prerequisite: Three upper division units in women's studies.

History, cultural attitudes, and politics of reproduction and sexual health to include abortion, contraception, sterilization, sexually transmitted diseases (STDs), HIV/AIDS, sex education, reproductive, and genetic technology.

#### **WMNST 522. Women: Madness and Sanity (3)**

Prerequisites: Three upper division units in women's studies.

Mental health and mental illness in literature, film, and psychological research. Clinical and feminist approaches to mental health issues in women's lives.

#### **WMNST 530. Women's Movements and Activism (3)**

**(Selected sections offered as distance education)**

Prerequisites: 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.

#### **WMNST 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)**

Prerequisites: Three upper division units in women's studies.

Intersecting theories of gender, race and class in both local and global contexts. Major themes in history, culture, and contemporary lives of women analyzed through feminist and critical race theories.

#### **WMNST 540. Women and the Environment (3)**

Prerequisites: Three upper division units in women's studies.

Women environmental activists and authors including those in diverse communities, settings, and alliances (native American, British colonial, Asian, American environmental movements, urban environmental justice).

#### **WMNST 545. Women and Sports (3)**

Prerequisite: Three upper division units in women's studies.

Diverse women's creation of and involvement in recreational and competitive sports, mid-1800s to present to include impact of medical experts' views, homophobia, disability, individual elite athletes, team sports, economic viability, and changes since Title IX.

#### **WMNST 553. Women and the Creative Arts (3)**

Prerequisites: 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 560. Women in Muslim Societies (3)**

Prerequisites: Three upper division units in women's studies.

Socio-political status of women in Muslim societies in Middle East, North Africa, and Asia; women in the Quran; Muslim women's movements.

#### **WMNST 565. Women: Health, Healing, and Medicine (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: 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-governmental organizations.



**WMNST 581. Women's Experiences of Migration (3)**

Prerequisites: 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. Feminist Science Studies (3)**

Prerequisites: Three upper division units in women's studies.

Feminist philosophy of science, history of science, and social studies of science. Feminist critiques of science and technology to include patented life forms, reproductive technologies, genetic engineering and cyberfeminism.

**WMNST 590. Feminist Thought (3)**

Prerequisites: 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)**

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)**

Prerequisites: Consent of instructor.

Advanced topics in women's 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. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**WMNST 597. Research Project (3)**

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) Cr/NC**

Prerequisites: 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. Internship includes 120 hours of work in local public and private agencies serving women and girls. Maximum credit six units.

**GRADUATE COURSES**

**WMNST 601. Foundations of Feminist Scholarship (3)**

Prerequisites: 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)**

Prerequisites: 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)**

Prerequisites: Six upper division units in women's studies.

Representations of women, gender, and femininity in literature, art, music, and other cultural productions. Interconnection between representations of gender, race, ethnicity, class, and sexualities. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units.

**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)**

Prerequisites: Graduate standing or two upper division women's studies courses.

How gender, culture, ethnicity, class, religion, sexualities, and physical challenges define interplay of privilege and oppression. Theoretical and practical implications discussed.

**WMNST 608. Seminar: Body Politics (3)**

Prerequisites: Classified graduate standing.

Historical exploration illuminates contemporary and past constructions of female, male, and transgendered sexualities. Facilitates ability to critique "innate" vs. culturally constructed behaviors and identities. Key institutions that control and define the body explored: labor, race, economics, law, and medicine.

**WMNST 609. Seminar: Transnational Economics and Gender (3)**

Prerequisites: Six upper division units in women's studies.

Globalization of economy with focus on women's lives. Case studies of effect of transnational economic processes on women and role of gender in shaping these processes.

**WMNST 611. Seminar: Gender and Diaspora (3)**

Prerequisites: Graduate standing.

Historical and interdisciplinary perspectives on gendered impact of forcible migration (African, Jewish, Asian). Scholarly debates concerning influence of men's and women's experiences of diaspora on modern political identities, social movements, and cultural production. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit of six units.

**WMNST 696. Selected Topics in Women's Studies (3-6)**

Prerequisites: 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. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**WMNST 701. Seminar in Women's Studies (3)**

Prerequisites: 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/RP**

Prerequisites: 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**

Prerequisites: 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**

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

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

**Women's Studies**

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

Prerequisites: 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.

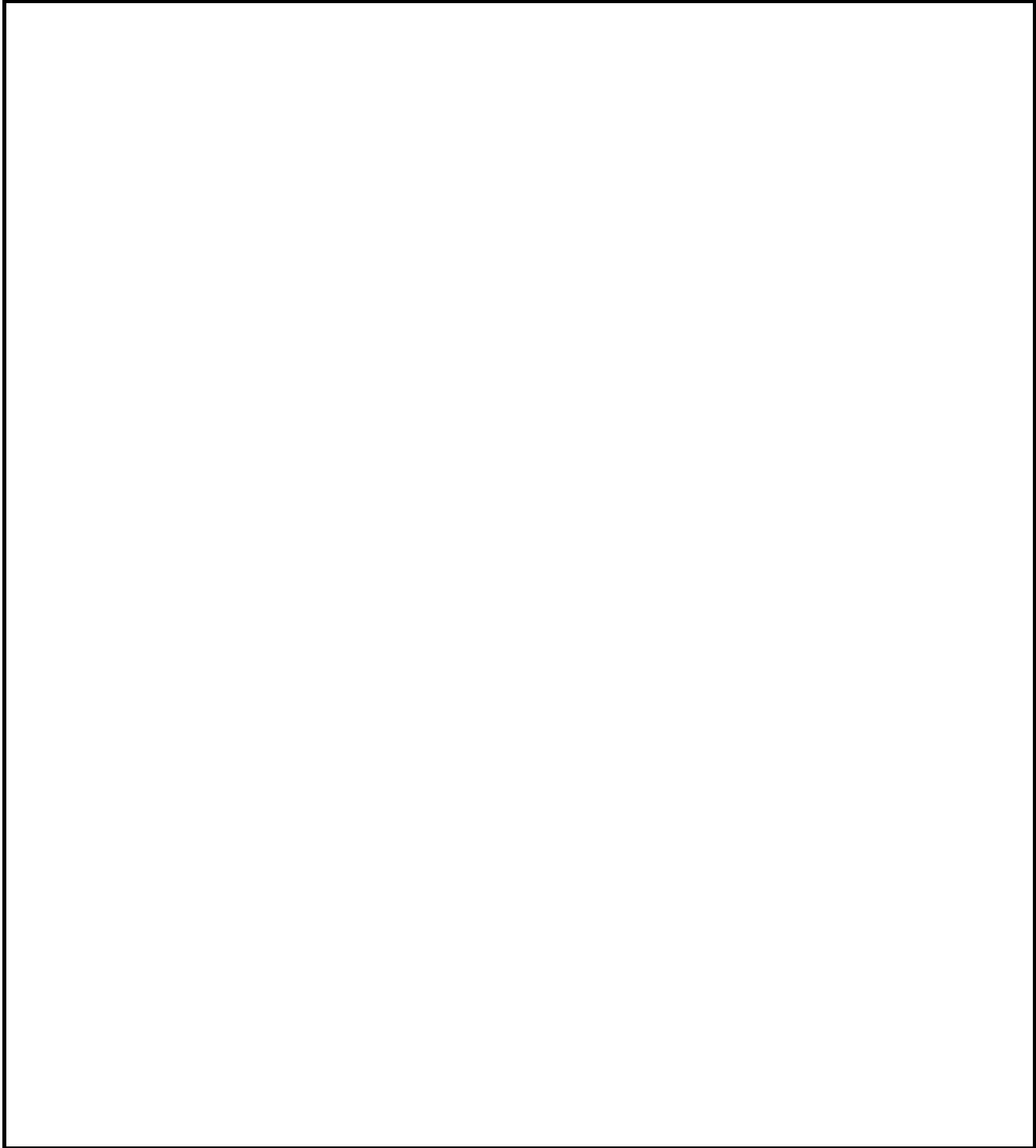
**WMNST 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisites: 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. Registration in 799C limited to two semesters.

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# Division of Research Affairs

## Research Affairs

The Division of Research Affairs 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 Research Foundation/University liaison.

The Division of Research Affairs is supervised by the director, who with the 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, but not limited to, 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 Bio/Pharmaceutical and Biodevice Development Stanley R. Maloy, Interim Director

The center focuses on education and training specifically applicable to the research, development, process development, manufacturing, and marketing of FDA regulated pharmaceutical, biologic and medical device products. Faculty and courses from departments within the Colleges of Sciences and Business Administration are integrated with the center's programs to provide students with a broad understanding of science and management issues that exist in the biomedical industry work environment. The center's programs particularly address the research and workforce needs of biotechnology companies as their initial product development projects progress from R&D into clinical research, process development, and manufacturing. The Master of Science in Regulatory Affairs was the first degree program developed and offered by the center. This program addresses overarching legal, ethical, and regulatory requirements that impact the development, manufacturing, and commercialization of biomedical products.

A second, newer Master of Science in Biomedical Quality Systems degree program is being offered by the center. With a focus on the quality aspects of development, manufacturing, and commercialization of biomedical products, it strongly complements the regulatory affairs program and the two programs share some elective courses. Both of these programs also offer a certificate to those students interested in obtaining a foundational understanding, through successfully completing four basic courses.

Internet-based, distance teaching technologies are used to make the center's education and training programs more widely available to individuals outside of the San Diego area, and this also facilitates the training of industry professionals who often find themselves traveling worldwide on company business. The center is also engaged with regional economic development and workforce development issues

and the future acquisition of new training and research facilities. The center interfaces extensively with the California State University Program for Education and Research in Biotechnology (CSUPERB). The Web site is <http://interwork.sdsu.edu/cbbd/aboutus.htm>.

### California State University Program for Education and Research in Biotechnology (CSUPERB)

Susan Baxter, 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 system, such as the SDSU Microchemical Core Facility, the SDSU Macromolecular Structural Analysis Resource Center, the CSU Stanislaus Confocal Microscope Core Facility, the CSU Fullerton W. M. Keck Foundation Center for Molecular Structure, and the CSU Long Beach Facility for Elemental Micro-Chemical Analysis (FEMCA). It facilitates interdisciplinary cooperative activities among the Colleges of Sciences and Engineering, the key departments on all campuses, as well as among 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 \$2 million annually for programmatic development, for joint corporate research ventures with industry, and faculty seed program for student research. It also serves as the official liaison between the CSU and industry, government, 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 CEO's, 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, Humboldt State University, CSU East Bay, CSU Los Angeles, and Cal Poly, San Luis Obispo. Faculty input into the organization and its multiple activities is through a 100 member Biotechnology Faculty Consensus Group. The Web site is <http://www.csuchico.edu/csuperb/>.

### 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. 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 Web site is <http://mintaka.sdsu.edu/>.

**Southwest Consortium for Environmental Research and Policy (SCERP)**

**D. Rick Van Schoik, Director and Paul Ganster, Chair of Management Committee**

SCERP is a consortium comprised of five U.S. universities (including San Diego State University, Arizona State University, New Mexico State University, University of Texas at El Paso, and University of Utah) and five member Mexican universities (El Colegio de la Frontera Norte, Universidad Autónoma de Baja California, Instituto Tecnológico de Ciudad Juárez, Universidad Autónoma de Ciudad Juárez, and Instituto Tecnológico y de Estudios Superiores de Monterrey). SCERP plays an important role in improving the quality of life and addressing the environmental problems faced by more than twelve million residents living in the border region.

The consortium is governed by a management committee consisting of one representative from each member university. Paul Ganster, Director of SDSU's Institute for Regional Studies of the Californias, is the SDSU representative and chair of the SCERP management committee. In addition, SCERP's Office of the Managing Director is located at SDSU and utilizes space provided by the SDSU Research Foundation. The director of that office reports to the chair of the SCERP management committee.

Since its inception in 1989, the Southwest Consortium for Environmental Research and Policy (SCERP) has conducted more than 400 Mexican and American research projects to address the acute air, water, and health problems plaguing the U.S.-Mexican border region. SCERP's contribution to this research has helped facilitate numerous solutions to critical environmental problems in this unique expanse. The 10-university consortium has also conducted briefings for policy-makers, border communities, public officials, and business and trade associations. Through these and other efforts, the consortium is pioneering a model of binational cooperation that proves two very different countries can achieve success together when critical environmental resources are at stake.

Over the years, SCERP has supported approximately \$7.5 million in projects at SDSU in the colleges of Arts and Letters, Sciences, Health and Human Services, and Engineering and at the Imperial Valley Campus of SDSU. This funding has strengthened collaborative ties with Mexican and U.S. SCERP universities. The SCERP project has been of benefit to SDSU students through increased opportunity for international applied research and interaction with Mexican faculty and students, enrichment of curriculum, and greater access to research materials about the border region. In addition to undergraduate participation, SCERP projects regularly employ graduate students and have funded approximately one dozen Master's theses and one Ph.D. dissertation. It directly supports SDSU priorities including applied research and community outreach, the developing Environmental Science Program, and internationalization of the university. SCERP-supported research projects at SDSU regularly produce results of use to State of California agencies, including the Water Resources Control Board, Cal/EPA, Air Resources Board, Health and Human Services, and Resources Agency. Elected officials and their staffs, including joint legislative committees frequently use results of SDSU-SCERP applied research projects. Regional and community agencies likewise utilize expertise on border environmental issues developed through SCERP-supported activities.

SCERP programs also address long-term concerns of U.S.-Mexican border communities. Through the Border Institute think tank series, organized primarily by SDSU, SCERP has brought together members of Congress; border subject experts; decision makers, leaders, and planners from border communities; border business representatives; and other stakeholders from border cities to discuss important issues concerning the future state of the environment in the U.S.-Mexican border region. Initiated in 1998, the series has dealt with such topics as border demographic projections, infrastructure needs, energy demands, binational water management, the state of the border and the health of its citizens, and binational ecosystem conservation.

Through its programs and projects, SDSU-SCERP addresses critical environmental issues in the California-Baja California Border Region and helps develop solutions to the region's problems. The projects enhance binational cooperation, build regional capacity by training students as the next generation of leaders, leverage funding, translate technical material, and disseminate information to the general public.

For more information about SCERP activities at SDSU, please contact Dr. Paul Ganster, e-mail: [pganster@mail.sdsu.edu](mailto:pganster@mail.sdsu.edu) or Ms. Angélica Villegas, e-mail: [scerpcal@mail.sdsu.edu](mailto:scerpcal@mail.sdsu.edu). The Web site is <http://www-rohan.sdsu.edu/~irsc/scerp.htm>.

**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  
Bonnie K. Scott, Director**

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. The Web site is

[http://www-rohan.sdsu.edu/dept/wsweb/bread\\_roses.html](http://www-rohan.sdsu.edu/dept/wsweb/bread_roses.html).

**Chinese Studies Institute  
Li-Rong Lilly Cheng, Director**

The Chinese Studies Institute coordinates and supports on-campus teaching and research related to the Chinese speaking world. The institute develops and fosters faculty and student exchange programs with universities and institutions of higher learning. Various cultural programs on the Chinese speaking world and activities on campus and in the community promote cultural awareness and understanding. The development of Chinese language 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. The Web site is

<http://www-rohan.sdsu.edu/~cias/index.htm>.

**Institute of Druze Studies (IDS)  
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>.

**Center for Earth Systems Analysis Research (CESAR)**

**Allen Hope, Sergio J. Ray, and Douglas Stow, Co-Directors**

The Stephen and Mary Birch Foundation Center for Earth Systems Analysis Research (CESAR) was founded in 1986 as a computer-based facility for geographic information science research and instruction that is administered by the Department of Geography. The purpose of the center is to apply state-of-the-art, geo-spatial technology in geographic information systems (GIS), global positioning systems (GPS), remote sensing, image processing, automated cartography, spatial statistics, and spatial modeling to problems with geographic dimensions. As such, a number of Geography Department faculty are affiliated with the center. Research conducted by CESAR is directed at both applied and fundamental problems in fields ranging from urban and regional planning to earth system science. This research includes computer-based map and image data processing and spatial simulation modeling, as well as field-based data collection. CESAR has extensive hardware, software, imaging systems, and field equipment resources in its four laboratories: (1) Richard Wright Spatial Analysis Laboratory, (2) Regional Analysis Laboratory (REGAL), (3) William Finch Remote Sensing Laboratory, and (4) Stephen and Mary Birch Foundation GIS Laboratory.

For more information about on-going research projects or services provided by CESAR, or for a demonstration of its capabilities, call 619-594-8042 or 619-594-5437 or [dave@geography.sdsu.edu](mailto:dave@geography.sdsu.edu).

**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 Department of Philosophy, 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. The Web site is <http://ethics.sdsu.edu/>.

**Center for European Studies**

**Veronica Shapovalov, 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 Veronica Shapovalov, Department of European Studies, 619-594-5111 or 594-7147; [veronica.shapovalov@sdsu.edu](mailto:veronica.shapovalov@sdsu.edu).

**Charles Hostler Institute on World Affairs**

**Paul Wong, Director**

The Charles Hostler Institute on World Affairs, founded in 1942, is beginning its 65<sup>th</sup> year at San Diego State University. It is the second oldest organization of its kind west of the Mississippi River. Its purpose is to make available to the SDSU community, and to the people of Southern California, a forum for the discussion of critical topics in international affairs. This purpose is accomplished primarily by inviting distinguished authorities to address the institute on issues of contemporary international import. The institute has hosted ambassadors to the U.S. from Australia, Belgium, Brazil, China, Czechoslovakia, Finland, Germany, Greece, Hungary, India, Italy, Jordan, Korea, Malaysia, Mexico, Netherlands, Nigeria, Pakistan, Singapore, Sweden, Syria, Thailand, and Yemen. Distinguished speakers have included Nobel Laureates Willard Libby, Linus Pauling, and Harold Urey, as well as Professors Hans Morgenthau and Robert Scalapino, British Ambassador to the United Nations Lord Caradon, American statesman Ralph Bunche, California Governor Pat Brown, French diplomat and author Romain Gary, Austrian Chancellor Kurt Schuschnigg, Russian Premier Alexander Kerensky, and USAF Chief of Staff and SDSU graduate General Merrill McPeak. American politicians, military and government officials, diplomatic and governmental representatives from Africa, Asia, Europe, Latin America, and the Middle East have also participated in institute sessions over the last 60 years.

Institute events are held on campus, in Hardy Tower 140 from 7:00-9:30 p.m. on Thursday evenings, during the spring semester.

For more than half a century, the institute has functioned according to the motto – *AUDIATUR ET ALTER A PARS* (Let The Other Side Be Heard). Given today's pressing problems of international affairs and the obligation of an excellent university to help inform students, faculty, and the wider community regarding these problems, the Charles Hostler Institute on World Affairs plays a critical role in the educational mission of SDSU.

**Center for International Business Education and Research (CIBER)**

**Mark J. Ballam, Managing Director**  
**Siv Lang Lim, Program Coordinator**

The Center for International Business Education and Research (SDSU CIBER) is one of 31 national centers of excellence in the United States and was established in 1989 under a grant from the U.S. Department of Education. The center is housed in the College of Business Administration.

SDSU CIBER serves as a catalyst to advance: (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 available to members of the business community and other professionals designed to develop or enhance international skills, awareness, and expertise; (4) collaborative programs, activities, or research involving other institutions of higher education, local educational agencies, professional associations, businesses, firms or combinations thereof, to promote the development of international skills, awareness, and expertise among current and prospective members of the business community and other professionals; (5) research designed to strengthen and improve the international aspects of business and professional education and to promote integrated curricula; and (6) research designed to promote the international competitiveness of American businesses and firms, including those not currently active in international trade.

The SDSU CIBER Web site is: <http://www.sdsu.edu/ciber>.

**International Population Center (InterPop)**

**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, the U.S.-Mexico border, Africa, 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. The Web site is

<http://geography.sdsu.edu/Research/Projects/IPC/ipc2.html>.

**International Studies Education Project (ISTEP)**

**Elsie Begler, Director**

The International Studies Education Project (ISTEP) supports the twin SDSU priorities of community outreach and internationalization through the promotion of international studies education in our schools and community. Programs designed to improve teaching and learning at the pre-collegiate level are emphasized, with particular foci on the social sciences and humanities as they relate to international, cross-cultural and citizenship education within both the domestic American and wider global context.

ISTEP programs are multidisciplinary and collaborative in nature, involving partnerships with other SDSU academic departments, centers and institutes, as well as with other educational institutions and community groups. Programs include in-service teacher training and professional development workshops and institutes, curriculum development, student-focused programs, and partnerships with schools and districts. The ISTEP Instructional Resource Center is a "demonstration" collection of K-16 instructional materials in global issues, world areas and cultures, and cross-cultural education available to SDSU students and educators throughout San Diego County. Project activities and resources are publicized through the ISTEP newsletter, *Global Vistas*.

For more information, call 619- 594-2412 or 619-594-1105 or visit ISTEP's Web site at <http://istep.sdsu.edu>.

**International Technology and Trade Network (ITTN)**

**Marc Siegel, Director**

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 Diane Coseo with the SDSU CIBER at 619-594-8599 or [dcoseo@projects.sdsu.edu](mailto:dcoseo@projects.sdsu.edu).

**Center for Islamic and Arabic Studies**

**Ghada Osman, Director**

The Center for Islamic and Arabic Studies administers the minor in Islamic and Arabic Studies, and the major in Social Science: Emphasis on Islamic and Arabic Studies. It is committed to supporting teaching and research 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 Ghada Osman, Director, at [gosman@mail.sdsu.edu](mailto:gosman@mail.sdsu.edu). The Web site is <http://www.cias.sdsu.edu>.

**Center for Latin American Studies**

**James B. Gerber, Director**

**Ramona L. Pérez, Associate Director**

The Center for Latin American Studies supports teaching and research related to Latin America. It has primary responsibility for the administration of the Latin American studies 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 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 information 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. The Web site is <http://latinamericanstudies.sdsu.edu>.

**Lipinsky Institute**

**Risa Levitt, Director**

The Lipinsky Institute supports the advancement for community outreach and the annual visiting Israeli professorship. The Web site is <http://www-rohan.sdsu.edu/dept/lipinsky.com>.

**National Center for the Study of Children's Literature (NCSCCL)**

**Jerome J. Griswold, Director**

Situated in the Department of English and Comparative Literature, the National Center for the Study of Children's Literature (NCSCCL) reflects SDSU's long-term and extended commitment to the literary study of children's and adolescent literature. The largest in North America and one of the oldest, SDSU's children's literature program employs more than a dozen faculty (many with international reputations in the field) and garners more than 1100 student enrollments every year in its undergraduate classes and the M.A. Specialization in Children's Literature.

As a research center, the NCSCCL hosts visiting scholars, sponsors annual lectures and festivals, and provides faculty with the wherewithal to engage in scholarship in a collegial environment. In terms of community outreach, NCSCCL faculty conduct summer workshops and professional development seminars for K-12 teachers and university faculty offering classes in children's literature; they also discuss books for the young in various media outlets and speak to public and professional groups. Finally, faculty from NCSCCL review and evaluate contemporary children's books on the largest Web site of its kind in the country. For more information: see <http://childlit.sdsu.edu/> or email [childlit@mail.sdsu.edu](mailto:childlit@mail.sdsu.edu).

**National Language Resource Center/  
Language Acquisition Resource Center (LARC)  
Mary Ann Lyman-Hager and Paul Wong, Co-Directors**

SDSU created the Language Acquisition Resource Center (LARC) in 1989 to improve the capacity of the university 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. LARC's authorized activities are to conduct research in second language acquisition, to develop new means of assessing language proficiency, to train foreign language teachers, to enhance cross-cultural competence, to develop high levels of language competence, particularly in critical less commonly-taught languages, and to explore advanced technologies to enhance language learning experiences. Currently the U.S. Department of Education funds 14 campus-based national centers. SDSU's center has one of the nation's finest multimedia collections and language laboratory facilities, with digitizing and desktop video conferencing capabilities, a research library, smart classrooms, and faculty offices. The laboratories also serve foreign language students in several departments (European Studies, Linguistics and Asian/Middle Eastern Languages, and Spanish and Portuguese).

LARC has enhanced its infrastructure and internet capabilities in order to explore and develop models of distributed and distance learning. These models reflect the changing demographics of SDSU students and require new curricula to reflect student learning preferences. Our digital media archive houses learning objects, authentic materials, lesson plans, and courses and allows for online contributions from national and international collaborators.

LARC hosts a companion initiative, the Advancement of Distinguished Language Proficiency, whose major purpose is to create opportunities for learners of Arabic, Persian, Spanish, Chinese, and other important world languages to reach advanced, superior, and distinguished levels of proficiency through on-site intensive courses, follow-up online learning experiences, and study abroad. Another major emphasis of LARC faculty is to facilitate the learning of less commonly taught languages of Latin America, in collaboration with the Center for Latin American Studies and other national resource centers funded by the U.S. Department of Education. To evaluate students' progress through levels, we are developing online diagnostic assessment tools. The Web site is <http://larcnet.sdsu.edu/>.

**Center for Qualitative Research  
Paul W. Sargent, Director**

The Center for Qualitative Research, located within the Department of Sociology at San Diego State University, promotes the use of qualitative methods in the quest to understand and explain important aspects of social organization. Over 20 departments and programs from across the seven colleges of SDSU are represented in the center's core group of participants. Qualitative researchers utilize a wide range of methods to gather data including participant observation, in-depth interviews, content analysis, focus groups, photography, film, and videography to accomplish a holistic study of social meanings, social relations, and social institutions. The primary objectives of the center are to:

- Create and sustain an interdisciplinary community of scholars whose principal research focus is qualitative rather than quantitative.
- Organize and facilitate workshops and colloquia focusing on the key issues facing qualitative researchers such as methodological, epistemological, and ethical issues.
- Provide a forum for the dissemination of the products of qualitative research across all disciplines. In particular, the center sponsors several colloquia each academic year where faculty and students can showcase their work to an appreciative audience. In addition, the center archives and publicly displays samples of ethnographic work.

- Furnish a connection between the intellectual community of San Diego State University and surrounding communities by promoting locally relevant research.

For more information call 619-594-2783; [CQR@sdsu.edu](mailto:CQR@sdsu.edu). The Web site is <http://www-rohan.sdsu.edu/~psargent/PaulHome.html>.

**Institute for Regional Studies of the Californias (IRSC)  
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 universities and 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 Consortium for Environmental Research and Policy, a congressionally established consortium of Mexican and U.S. universities for research and policy studies on border environmental issues. For more information, please visit the Web site at <http://irsc.sdsu.edu>.

**Center for Interdisciplinary Studies of  
Youth and Space (ISYS)**

**Stuart C. Aitken, Director; Tom Herman, Managing Director  
Fernando Bosco, Doreen Mattingly, Ramona Pérez, Co-Directors**

ISYS is an interdisciplinary collective of academic and community interests. The mission of the center is to support research on children, families, and space. It includes not only international scholarship and global perspectives on young people and families, but also local community research initiatives in San Diego and Tijuana.

The geographical contexts within which young people live structure individual lives and provide connections to social and political formations. It is important to get beyond the problematization of "children," "families," and "communities" as categories so that we may find ways to account for unique process of identity formation and the relationships through which young people construct their lived spaces. Consequently, ISYS supports research that is intent on raising new questions concerning the interdependence of children, caregivers, their communities and social and spatial structures.

The center focuses on local and international research, workshops, and conferences as funding allows. It is connected to international child research centers elsewhere including a faculty and graduate student exchange program with the Norway's National Technological University (NTNU) in Trondheim and its National Center for Childhood Research (NOSEB). ISYS sponsors the international Routledge journal, *Children's Geographies: Advancing interdisciplinary understanding of younger people's lives*. In addition to this international, global focus, ISYS supports research in San Diego and Tijuana that relates to children, families and communities.

ISYS is located in Storm Hall 324. For information call (619) 594-6498, or visit us at <http://geography.sdsu.edu/Resources/Centers/ISYS/isys.html>.



## Social Science Research Laboratory (SSRL)

Paul Wong, Director

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 six units: Instructional Services, Research Services, Data Services, Web Services, Systems Support Group, and CAL Help Desk. The department employs twelve full-time staff complemented by other employees including lecturers, computer lab consultants, research assistants, and data collection specialists. The SSRL is located in Professional Studies and Fine Arts, Room 140 or at <http://ssrl.sdsu.edu>.

**Instructional Services** develops programs 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; (2) class presentations requested by faculty to support computer-related instructional assignments; and (3) individual consultation for students using SSRL's open-access computing facilities.

**Research Services** offers a complete range of public opinion polling and survey research services, including instrument design, data collection, data reduction, graphic presentation of data, statistical analysis, and data archiving. The section maintains an 18 station computer-assisted-telephone-interviewing (CATI) system to support research projects. Graduate internships and research assistant positions are available. Typical research clients include government organizations, companies, community groups, SDSU faculty, and SDSU administrators.

**Data Services** provides support for the use of 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 LexisNexis Academic Universe. Assistance includes locating, downloading, installing, sub-setting datasets, and providing class presentations for instructional or research applications.

**Web Services** provides support for Web site design for departments and faculty including information architecture, visual design, usability testing, compliance with accessibility standards, 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, virus recovery, and procurement consultation.

**CAL Help Desk** serves as the initial point of entry and triage for College of Arts and Letters faculty and staff who require assistance with computer-related problems. An extensive software coaching program for individual faculty and staff is offered.

## College of Business Administration

### Center for Accounting in the Public Interest

Martha Doran, Director

The Center for Accounting in the Public Interest (CAPI) serves the public's need for a restored sense of confidence and trust in how financial issues are handled by business and government. Public perception of institutions is that one cannot trust what is being said or done because of a lack of transparency, completeness, independence, and objectivity. The center is neither an advocate nor an adversary of any specific position, but serves as an honest broker of accountability and provides a platform from which to disseminate analysis and explanations of financial reporting and assumptions.

The center was established in 2006 and received its first grant from the President's Leadership Fund. CAPI is dedicated to serving the public interest in four unique ways:

- CAPI is a not-for-profit center, part of a university community that encourages innovation without the same pressures of pleasing specific clients or interests;
- CAPI includes as its mission the goal of leading forth and transforming students, alums, entrepreneurs,... the community;
- CAPI strives to harness the best aspects of the "ivory tower" by providing learning opportunities and knowledge, facilitating discussions, evaluating "common wisdom"...all of these services without being employed or mandated by some specific entity;
- CAPI provides ideas and educational outreach to support the public interest, not a specific product or point of view, which can foster greater trust and confidence in facilitating dialogue on the challenges of the 21<sup>st</sup> Century.

CAPI's mission is to serve the public interest as an honest broker for the whole truth, by facilitating informed financial dialogues, improving financial literacy, ethical literacy and fraud awareness. The center has sponsored and participated in panel discussions, has plans to host an accountability conference, plans to offer courses and workshops, and provides on line resources and communication through the Web site at <http://capi.sdsu.edu>.

### Corporate Governance Institute (CGI)

Lori Versteegen Ryan, Executive Director

The Corporate Governance Institute (CGI) is an education and research center dedicated to the study and application of responsible corporate governance principles. Founded in 1998, the mission of the CGI is to enhance the skills of corporate directors, senior executives, and investors by creating and delivering initiatives related to a) director and executive development, b) research, and c) curriculum innovation. CGI programs focus on identifying and applying "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.

CGI staff can be reached by telephone at 619-594-5314, or by e-mail at [CGI@SDSU.edu](mailto:CGI@SDSU.edu). The CGI Web site is

<http://www.SDSU.edu/CorpGov>.

### Institute for Diversity and Inclusiveness in Organizations (IDIO)

Lynn M. Shore, Director

The purpose of the Institute for Diversity and Inclusiveness in Organizations (IDIO) is to support the development of knowledge and competencies needed to manage a more diverse workforce in a global business environment. Diversity is viewed here in broad terms, incorporating age, ethnicity, disability, sexual orientation, culture, and nationality. Both the changing nature of the work force and the global challenges faced by organizations point to the value of researching social trends. This information deepens the body of knowledge about organizational diversity for management scholars, presents needed information to the business community, provides research opportunities for faculty, and offers educational opportunities for students. Founded in 2006, the IDIO seeks to accomplish these goals by: (1) conducting survey research that investigates the impact of organizational diversity and globalization, with the goal of improving organizational effectiveness; (2) cultivating mutually beneficial relationships with organizations (private sector, public sector, and nonprofit) that support the goals of optimizing human resource management and development in a diverse and interconnected world; and (3) contributing to the education of students, employees, managers, and executives to prepare them for roles in an increasingly diverse and global world. The IDIO also seeks to create research partnerships among faculty at SDSU and at other universities to enhance the knowledge base on social trends, and to increase the international reputation and visibility of the College of Business Administration among scholars and the business community. For further information, contact the director at 619-594-4309 or [lshore@mail.sdsu.edu](mailto:lshore@mail.sdsu.edu).

**Entrepreneurial Management Center (EMC)**  
**Sanford B. Ehrlich, QUALCOMM Executive Director**  
**Richard D. Brooks, Director of Communications**  
**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 are 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 Venture Challenge, 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 EMC also offers students numerous internship and consulting opportunities with growth-oriented companies and non-profit organizations, and positions within its Center for Commercialization of Advanced Technology (CCAT). The EMC is located in Gateway 1502, 619-594-2781; FAX 619-594-8879; <http://www.sdsu.edu/emc>.

**Center for International Business Education  
and Research (CIBER)**

**Mark J. Ballam, Managing Director**  
**Siv Lang Lim, Program Coordinator**

The Center for International Business Education and Research (SDSU CIBER) is one of 31 national centers of excellence in the United States and was established in 1989 under a grant from the U.S. Department of Education. The center is housed in the College of Business Administration.

SDSU CIBER serves as a catalyst to advance: (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 available to members of the business community and other professionals designed to develop or enhance international skills, awareness, and expertise; (4) collaborative programs, activities, or research involving other institutions of higher education, local educational agencies, professional associations, businesses, firms or combinations thereof, to promote the development of international skills, awareness, and expertise among current and prospective members of the business community and other professionals; (5) research designed to strengthen and improve the international aspects of business and professional education and to promote integrated curricula; and (6) research designed to promote the international competitiveness of American businesses and firms, including those not currently active in international trade.

The SDSU CIBER Web site is: <http://www.sdsu.edu/ciber>.

**International Institute for the Commercialization  
of Biomedical Innovation (IICBI)**

**Gail K. Naughton, Director**

The International Institute for the Commercialization of Biomedical Innovation (IICBI) seeks to bring the world's biomedical innovations to the marketplace. The goal of the IICBI is to work with leading universities to expedite biomedical concepts into development; and then

move them forward into the marketplace. The IICBI works with national as well as international universities to develop and bring new medical devices, apparatuses, pharmaceuticals, and treatments to the marketplace. It is partnered with other universities to identify and in-license technologies. Students, faculty, and key life science business leaders work together to develop: (1) a business plan; (2) an IP strategy; (3) a patent for a disclosure, regulatory plan; (4) a competitive strategy for the technology; and (5) identify and pursue commercial partners to develop and market the end product. The mission of the IICBI is to provide the expertise and infrastructures to support the development and commercialization of biomedical innovation from universities across the globe that currently lack the ability to bridge the gap between concept generation and product launch. For more information, contact Gail Naughton in the College of Business Administration at [gail.naughton@sdsu.edu](mailto:gail.naughton@sdsu.edu).

**International Technology and Trade Network (ITTN)**

**Marc Siegel, Director**

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.

**Center for the Study of Personal Financial Planning  
(CSPFP)**

**Thomas Warschauer, Director**

The center encourages research in individual and family finance to further the ability of financial counselors and planners to provide advice that aids in achieving their financial objectives.

The theoretical base of decision-making criteria for personal financial decisions is weak and sometimes non-existent. In many cases, individuals, families, and their financial planners and advisers make important decisions that have little or no theoretical foundation. The finance discipline – as taught at the university-level – has grown around corporate decision-making, not decisions of the household. The development of an emerging financial planning profession has made this lack of theoretical basis evident. The center is founded on the belief that there is a significant need for scholars to share their ideas and mutually develop their research thoughts, for financial reporters to bring the practical application of this work to the attention of professionals and the public, and for students engaged in the study of financial planning to be aware of the latest findings of researchers engaged in this field.

The center is involved in the development of a national web-based research database and a national graduate student financial planning competition. The financial planning web-based bibliography is aimed at three groups of users: journalists, researchers, and students. Summaries of recent research in financial planning concepts is available for journalists to help disseminate research findings to the popular press. Researchers can find background articles listed by financial planning topical areas. Faculty can determine state of the art research on various topics by sharing research interests and/or discussion drafts. And nationally, students can access research to aid in their academic understanding of financial planning issues.

The center can be reached at 619-594-4040 or via e-mail at [tom.warschauer@sdsu.edu](mailto:tom.warschauer@sdsu.edu).

**Real Estate and Land Use Institute (RELUI)**

**James L. Short and Andrew Q. Do, Co-Directors**

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 participates in internship programs 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: [andrew.do@sdsu.edu](mailto:andrew.do@sdsu.edu) or [jim.short@sdsu.edu](mailto:jim.short@sdsu.edu). The Web site is

<http://arweb.sdsu.edu/es/admissions/ab/realestate.htm>.

**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. The Web site is

<http://www.psychology.sdsu.edu/advising/counseling%20psychology.htm>.

**Center for Educational Leadership, Innovation, and Policy**

**Marilee Bresciani and Stephen F. Barnes, Co-Directors**

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.

**Center for Equity and Biliteracy Education Research (CEBER)**

**Alberto M. Ochoa and Alberto Rodriguez, Co-Directors**

The Center for Equity and Biliteracy Education Research (CEBER) examines structural, social, and linguistic conditions that hinder or promote the advancement of democratic schooling and educational social justice for all students. CEBER aims to bring together scholars and education and community leaders to assist in the advancement of

knowledge regarding biliteracy and equity issues. Six components guide the work of CEBER: professional development and biliteracy teacher education, equity and biliteracy research on democratic schooling, international professional development of school personnel, biliteracy capacity from kindergarten to higher education, parental leadership in biliteracy, and dissemination of educational equity and biliteracy research.

**Interwork Institute**

**Fred R. McFarlane and Caren L. Sax, 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. Current efforts include universal design in all aspects of our community. Educational and research efforts involve organizations and individuals in all states, tribal communities, 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 3590 Camino del Rio North in Mission Valley. The Web site is <http://interwork.sdsu.edu/>.

**Center for Learning, Instruction, and Performance Technologies**

**Marcie J. Bober, Director**

The center's faculty and staff conduct research on the design and use of technology-based systems for enhancing human learning and performance, monitor trends in advanced applications of educational technology and allied disciplines, and evaluate 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.

**San Diego State University Literacy Center**

**Barbara Moss, Director**

The SDSU Literacy Center supports collaborative partnerships that serve a variety of diverse literacy needs in our community including assessment and tutoring in reading and writing for children, adolescents, and adults; workshops for parents to promote family literacy; professional education for teachers through coursework and institutes; and, research to inform teaching practice and effect systemic change in literacy education. The center houses the Community Reading Clinic and the Reading Recovery® Program. Credentialed teachers enrolled in graduate reading, certificate, and credential programs as well as professional staff conduct the tutoring and assessments. Professional development for reading recovery teacher leaders occurs at the center, and institutes are planned for reading recovery and elementary teachers in the community. Literacy center faculty members engage in research on effective instruction in reading and writing, teacher practices, and early intervention. The SDSU Literacy Center is located in City Heights in the Dede Alpert Center for Community Engagement, San Diego State University, 4283 El Cajon Blvd., Suite 200, San Diego, CA 92105. The Web site is

<http://edweb.sdsu.edu/literacy/>.

**Pre-College Institute (PCI)**

**Cynthia D. Park, Executive Director**

The faculty and staff of the Pre-College Institute (PCI), an institute to 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 Sweetwater Gear Up partnership with Compact for Success. The institute's international branch offers exchange opportunities for university faculty and students to visit and study in other countries. The Web site is

<http://www-rohan.sdsu.edu/dept/sdsutrio/>.

**Qualcomm Institute for Innovation and Educational Success**

**David T. Hayhurst, Ric A. Hovda, Geoffrey W. Chase, Co-Directors**

The Qualcomm Institute for Innovation and Educational Success is a partnership between Qualcomm/SDSU. This partnership was formed to accomplish the following objectives:

- Significantly increase the technology skills of SDSU graduates, thereby generating a more qualified workforce and a better-informed citizenry.
- Develop an educational system that values, encourages, and rewards creative methods of delivering education, from kindergarten through college graduation.
- Establish the institutional infrastructure at SDSU to support large-scale change and transformation of the education system through innovation, evaluation, and dissemination of effective educational methods.
- Dramatically shift the way education is delivered, from kindergarten through college, with an emphasis on improving technology skills and knowledge.
- Develop cross-curriculum synergies among SDSU academic programs that help teach technology skills to students in all courses of study.
- Develop an effective, sleeves-rolled-up dialogue among Qualcomm, SDSU, and the greater San Diego business and corporate community, with the goal of addressing challenges, identifying opportunities, and generating responsive action.

The institute has the following five components:

- *Strategic Initiatives Board* to provide oversight to the partnership.
- *Improving Student Achievement in Mathematics Program* to increase student mathematics performance in public schools.
- *Project Lead the Way* to increase the number and diversity of qualified students entering the College of Engineering.
- *People, Information, Communication, and Technology Program* to increase the integration of technology with undergraduate students.
- *National Center for Urban Schools Transformation* will assist urban public schools to dramatically improve the level of student achievement.

**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**

**Laura J. Hall and Minjuan Wang, 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**

**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. The Web site is <http://www.engineering.sdsu.edu/~sfrc/>.

**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. The Web site is <http://www.engineering.sdsu.edu/energy.html>.

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- *National Center for Urban Schools Transformation* will assist urban public schools to dramatically improve the level of student achievement.

**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. The Web site is <http://www.sdcmr.sdsu.edu/>.

**College of Health and Human Services**

**Center for Alcohol and Other Drug Studies and Services  
Thom Reilly, Director  
John D. Clapp, Associate Director**

The center was established in 1985 by the School of Social Work as the Center on Substance Abuse. In 2003, the emphasis was changed to research and evaluation, while maintaining its primary service program, a drunk driving education and treatment program. 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 and contracts and has several ongoing projects including the NIH funded College Party and Bar

Environmental Prevention Project and an Evaluation of California's State Prevention Grants. In addition, the center operates the Central District Driving Under the Influence Program, which provides education and counseling services for court-ordered offenders in the central judicial district of San Diego county. The center is located at 6386 Alvarado Road, Suite 224, 619-229-2340. The Central District Driving Under the Influence Program is located at 9245 Sky Park Court, Suite 101, 858-467-6810. The Web site is

<http://c2c.sdsu.edu/details.cfm?ID=106&Option=All>.

**University Center on Aging  
Mario D. Garrett, Director**

The Center on Aging is administered by the Department of Gerontology. The center is involved with 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, dissemination, and analysis of data related to diversity and aging and long-term care. The Web site is

<http://chhs.sdsu.edu/gero/facultydetail.php?ID=61>.

**Center for Behavioral and Community Health Studies (BACH)  
John P. Elder, Director**

**Terry L. Conway, Linda C. Gallo, Joni A. Mayer,  
and Gregory A. Talavera, Associate Directors**

The Center for Behavioral and Community Health Studies (BACH) 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 experiences to diverse students who intend to pursue related careers and offers opportunities for project staff and graduate students to participate in community interventions. The Web site is <http://behavioralhealth.sdsu.edu/>.

**Center for Behavioral Epidemiology and Community Health  
Melbourne F. Hovell, Executive 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). The Web site is <http://www.sci.sdsu.edu/c-beach/>.

### **California Distance Learning Health Network (CDLHN)**

**Richard M. Gersberg, Principal Investigator**  
**Violet Macias, Executive Director**

Founded in 1995, the mission of CDLHN is to produce, promote, and provide training and distance education on a variety of public health topics throughout California, the nation, and around the world. CDLHN's goal is to foster collaboration between health organizations and distance learning educators; and to increase access to the most advanced communication technologies available in the world today. CDLHN produces and promotes courses on a variety of public health topics of benefit to the public health workforce, health care workers as well as interested individuals in the general public. Recent productions include Responding to Bioterrorism: How to Set up Mass Vaccination Clinics, and an important and timely production on Pandemic Avian Flu. Productions and program materials are in both English and Spanish. CDLHN has formed strategic local (San Diego County Department of Health Services), state (California Department of Health Services, Immunization Branch), national (Federal Centers for Disease Control) and international partnerships with academic institutions, private organizations, and government agencies. CDLHN is a leader in distance learning efforts and will continue to make learning without limits a reality. The Web site is <http://www.cdlhn.com/>.

### **Communications Clinic for Speech, Language, Hearing Disorders and Deafness**

**Jacque Georgeson 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 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, 619-594-7747.

### **Consensus Organizing Center**

**Michael Eichler, Director**

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.consensus.sdsu.edu/>. 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. The Web site is

<http://www.bio.sdsu.edu/heart/sdsuhome.htm>.

### **Center for Injury Prevention and Research**

**Mario D. Garrett, Director**

Administered through the Department of Gerontology, 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, but with special emphasis on the elderly. The center accomplishes this purpose by: 1) Coordinating a multidisciplinary group of professionals dedicated to injury control and prevention; 2) Assisting in the coordination of existing 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 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. For additional information email [mgarrett@mail.sdsu.edu](mailto:mgarrett@mail.sdsu.edu).

### **Center for Injury Prevention Policy and Practice**

**David W. Lawrence, Director**

The Center for Injury Prevention Policy and Practice was founded in 1986 and is administered through the Graduate School of Public Health. Its mission is to reduce death and disability from injuries by fostering effective injury prevention programs, policies and systems. Current programs: 1) SafetyLit, a web-based research literature archive and weekly summary of recent injury prevention research, published in collaboration with the World Health Organization. 2) The California Older Adults Traffic Safety Project involves coordinating a multi-agency, public-private task force charged with developing and implementing a wide range of traffic safety policies. Related activities include developing professional education programs for physicians, nurses, and occupational therapists. 3) The California Maternal and Child Health Injury Prevention Program provides in-depth technical assistance to state and local MCH agencies. 4) The California Conference on Childhood Injury Control is an annual four-day meeting where 60 faculty provide training to approximately 400 people each year. 5) The California Kids Plates Program provides more than \$300,000 annually in grants to regional, county, and local injury prevention programs. 6) The Children's Safety Network Economics and Data Analysis Resource Center serves state health and education agencies to determine the incidence, risk factors, and costs of unintentional injuries and violence to children and adolescents.

Major funding for the Center is through long-term contracts with the US DHHS Health Resources and Services Administration, the California Department of Health and Human Services, and the California Office of Traffic Safety. For additional information, contact the director at [david.lawrence@sdsu.edu](mailto:david.lawrence@sdsu.edu), 619-594-1994. The Web site is

<http://www.cipp.org/>.

**June Burnett Institute  
for Children, Youth, and Families  
John M. Wedemeyer, Director**

The June Burnett Institute for Children, Youth, and Families is the administrative unit for the California Parent Center and the San Diego CHOICE Program. It exists as a non-profit organization under the auspices of the San Diego State University Research Foundation.

The June Burnett Institute was formed in 1985 through a \$1.5 million endowment from the estate of June Estelle Burnett. The institute emphasizes combined funding approaches that foster cooperation and collaboration; activities that blend direct service and research, interdisciplinary approaches that expand knowledge of children, youth and families, and evaluation of program activities. The Institute's two major programs are: the San Diego CHOICE Program and the California Parent Center. It has coordinated numerous national, state, and local demonstration programs funded in partnership with the U.S. departments of Health and Human Services, Labor, Education, and Housing and Urban Development; private foundations (Weingart Foundation, Price Charities, Edna McConnell Clark Foundation, San Diego Community Foundation and the Sierra Foundation), the County of San Diego, the State of California, the Sweetwater Union High School District, the San Diego Workforce Partnership, the City of San Diego, the Corporation for National And Community Service (AmeriCorps), and the San Diego Unified School District.

*San Diego CHOICE Program* - Since 1996, the institute has been responsible for implementing the San Diego CHOICE Program in cooperation with the San Diego Juvenile Court, the County of San Diego Probation Department, and the California Service Corps (AmeriCorps). CHOICE serves approximately 800 court-involved delinquent youth annually that are referred primarily by the County Probation Department. The San Diego CHOICE Program is modeled after the Choice Program developed by the Shriver Center at the University of Maryland. Services emphasize intensive daily contact with youth and families, and are available to residents of most areas of San Diego County. In addition to intensive services, CHOICE provides mentoring services for youth, and training workshops for parents using the Strengthening Families Model developed by Dr. Marilyn Steele. The CHOICE Program Web site is <http://choice.sdsu.edu>.

*The California Parent Center* - Since 1999, the institute has been responsible for developing and coordinating the activities of the *California Parent Center*. The center currently collaborates with the California Department of Education, the California State PTA, the California Association for Compensatory Education, and other parent groups across the state. It operates with a combination of grants, contracts and fee-based training services. Workshops titled *Leadership Development Conference for Family, School and Community Partnerships* are presented throughout California that provide training for teams of parents, parent facilitators and school personnel. Content includes Epstein's parent involvement theoretical framework, policies and guidelines of the No Child Left Behind Act (Elementary and Secondary Education Act of 2001), and "hands on" methods for reaching out and supporting parents of children enrolled in Title I Schools. The California Parent Center Web site may be found at: <http://parent.sdsu.edu>. In collaboration with SDSU College of Extended Studies, the center has developed the *Parent Liaison Certificate Program* for paraprofessionals working as parent involvement staff in schools. The target audience is staff at schools that are responsible for maintaining high quality parent involvement programs that support student achievement. The certificate is jointly issued by the California Parent Center and the San Diego State University College of Extended Studies.

**Institute for Nursing Research  
Diane Hatton, 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. Additional information is available at <http://nursing.sdsu.edu>.

**Academy for Professional Excellence  
Thom Reilly, Director  
Donald E. Dudley, Co-Director**

The Academy for Professional Excellence, administered through the School of Social Work, was established in 1996 with the mission to provide quality training and organizational support to health and human services agencies in the Southern California Region including the counties of Imperial, Los Angeles, Orange, Riverside, San Bernards, San Diego, Santa Barbara, and Ventura. The goal of the center is to make university faculty and staff available to public and private social services agencies in the region by providing expertise and technical assistance in curriculum development, in-service training, organizational development, evaluation, and research. The academy develops high quality competency based curriculum on select topics for social services agencies in the region; provides quality training to service providers and administrators employed in social services agencies; engages in research and evaluation to improve the quality, accountability and responsiveness of human service agencies; and, develops highly competent executives in the Southern California region who will have the skills, knowledge, and experience to effectively guide organizational change and development.

The academy has extensive experience in managing contracts with multiple partners and organizations/agencies, providing specialized services, including: curriculum development, multi-disciplinary competency-based trainings, workforce analysis, staff retention consultation, research, organizational development and organizational needs assessments, technical assistance and evaluation. Funding sources are grants and contracts from federal, state, and county government agencies as well as private non-for-profit agencies. The academy is located at 6505 Alvarado Road, Suite 107; 619-594-3546; <http://pcwta.sdsu.edu>.

**Institute for Public Health  
Suzanne P. Lindsay, Executive Director  
Robert L. Seidman, Deputy 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://iph.sdsu.edu/>.

**Center for Public Health Security  
Carleen H. Stoskopf, Director**

Administered by the Graduate School of Public Health and under the umbrella of the Institute for Public Security and Health, the center addresses the linkage between public health and national security with a focus on issues of infectious disease epidemics and global relations. The center partners with public-private community leaders to promote provider and other health partner disaster preparedness, public health determination of legal powers for action, capacity in epidemic detection, alert and response, and effective emergency risk communication. The center specializes in identifying policies, actions and resources needed to cope with the global public health workforce shortage. Defined broadly, the reciprocal beneficial partnerships within the center provide research opportunities and contextual knowledge that are of great value for operational agencies, such as San Diego County, Health and Human Services as well as for businesses in our community. The center conducts research on community disaster mitigation with a focus on vulnerable populations. The center is associated with the masters degree in Global Emergency Preparedness and Response (<http://publichealth.sdsu.edu/ms-global>), and supports the development of white papers on global preparedness and response issues, the creation of an SDSU/community partner model response team with trained students, faculty, staff and community members, and the hosting of an annual Global Emergency Preparedness Public Health Institute. For additional information contact the Graduate School of Public Health at 619-594-1255 or 619-594-3501.

**Institute for Public Security and Health (IPSH)  
Marilyn Newhoff, Executive Director**

The SDSU Institute for Public Security and Health (IPSH) provides an opportunity to build on existing SDSU strengths and facilitate cross-college efforts. The Colleges of Health and Human Services, Sciences, Engineering, Professional Studies and Fine Arts, Business Administration, and Arts and Letters are actively working with each other on many aspects of public security and health.

The institute provides an interdisciplinary vehicle by which the colleges and programs collaborate in research and teaching related to prevention, preparedness, response, and recovery for natural and man-made disasters. The institute also includes a focused response group that can provide tangible assistance to regional and global disaster response efforts. In this way, the participants from both the university and the community directly and strategically impact regional and global preparedness and response efforts, and provide positive leadership through this service.

The primary mission of the IPSH addresses public security and health issues, particularly those requiring educational, scientific, technical, and analytical expertise, and translates them into immediate application and service to the community. With the new Homeland Security master's degree and the Global Emergency Preparedness and Response master's degree, SDSU has two premier academic programs that specifically link faculty, staff, and students to the educational preparation for addressing disasters, both man-made and natural, for actual response from planning to implementation and evaluation.

By focusing on the planning, action-oriented preparation, and rapid deployment of capabilities for such emergencies and disasters, SDSU is able to provide critical assistance and engage with our campus community and beyond. These activities build regional and global capacities and capabilities to better respond to, and recover from, emergencies and disasters. In addition, SDSU makes connections among countries and assists people and groups in disaster-torn regions, on an ongoing basis. The institute serves as the umbrella entity to house both the Western Center for Public Health Security (College of Health and Human Services) and the Center for Homeland Security Technology Assessment (College of Sciences).

**Social Policy Institute  
Loring Jones, Coordinator**

Administered through the School of Social Work, the mission of the institute is to assist local, state and regional public and private sector leaders in the development of policies and programs that focus on family and community well-being. The institute is particularly focused on prevention programs that reduce adverse outcomes for vulnerable individuals, families, and communities. To this end, we assist with community needs assessments, as well as program development and evaluation. The Social Policy Institute has prepared a training manual and CD-ROM for home visitors and case managers working with vulnerable families and has recently conducted community needs assessments surveys in Baja California Sur for the purpose of policy and program development. A computerized information system to provide decision and evaluation support to human services agencies has been developed and is available through the San Diego State University Research Foundation Technology Transfer Office.

The SPI Web site is located at <http://www.sdsu-spi.org/>.

**College of Professional Studies  
and Fine Arts**

**Center for Hospitality and Tourism Research  
Carl Winston, Director**

The Center for Hospitality and Tourism Research represents is an education and research center dedicated to the study and application of 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 events, conventions and attractions 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 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 region.

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. The Web site is <http://www-rohan.sdsu.edu/dept/intlcomm/library.html>.

**Institute for Leisure and Tourism Management  
Vinod Sasidharan, Director**

The Institute for Leisure and Tourism Management is the research and community service unit within the School of Hospitality and Tourism Management at San Diego State University. It is primarily concerned with conducting leisure, recreation, and tourism related research, promoting professional development, sustainable practices, multicultural experiences, healthy lifestyles, disseminating specialized publications, organizing conferences, seminars, lectures and workshops.

The institute is governed by a board of directors which, in turn, is advised by a group of thirteen individuals from recreation and tourism fields. The advisory council has been instrumental in providing valuable information to the board concerning the needs and direction of the leisure and tourism 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, United States Forest Service, and the National Park Service.

The institute publishes monographs focusing on important issues relative to leisure and tourism services delivery. These are available to the public, as well as tourism, park, and recreation practitioners. Research projects under the direction of the institute focus on local, state, national, and international problems related to leisure, recreation, and tourism services. The Web site is [http://psfa.sdsu.edu/centers\\_and\\_institutes/leisure.html](http://psfa.sdsu.edu/centers_and_institutes/leisure.html).



**Center for Optimal Health and Performance (COHP)**

The Center for Optimal Health and Performance (COHP) is a service unit within the School of Exercise and Nutritional Sciences. It provides services to community members in the assessment of bone health and occasionally other areas such as physical fitness, diet, and cardiovascular risk. COHP is a co-sponsor with the Aztec Recreation Center to provide supervised exercise programming for adults, focusing especially on the middle and senior years. Target populations include (1) people interested in improving their physical fitness, physical activity, and nutritional behaviors; and (2) people seeking advice to prevent inactivity related chronic diseases. Committed to the promotion and support of active living and healthy eating, the center serves as an educational medium for undergraduate and graduate students to gain hands-on experience in exercise and nutritional assessments, counseling, and exercise leadership. COHP operates cooperatively with the SDSU Center for Behavioral Epidemiology and Community Health and in collaboration with the Bone Health Unit. The Web site is <http://www.cohp.sdsu.edu/>.

**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 and is the professional production arm of the university. The center mentors graduate students in media in the creation of projects that promote their artistic and technical growth, 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 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. The Web site is

<http://www.rohan.sdsu.edu/dept/socgrad/TFM/productioncenter.html>.

**Institute of Public and Urban Affairs**

**Stuart D. Henry, 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. The Web site is <http://www.rohan.sdsu.edu/~spaus/ipua.htm>.

**Dr. Sanford I. Berman Institute for Effective Communication and General Semantics**

**Brian H. Spitzberg, Director**

The Dr. Sanford I. Berman Institute for Effective Communication and General Semantics within the School of Communication is dedicated to the scholarly study of language and its relations among our symbolic activities, society, and the mind. Specifically, the institute is devoted to the assessment, investigation, and enhancement of communication processes in applied contexts. The Web site is

[http://psfa.sdsu.edu/centers\\_and\\_institutes/berman.html](http://psfa.sdsu.edu/centers_and_institutes/berman.html).

**Institute for the Study of Intercollegiate Athletics (ISIA)**

**Roger W. Caves, Director**

The Institute for the Study of Intercollegiate Athletics (ISIA) is a research center focused on the use of survey research methods to obtain much needed data about issues concerning intercollegiate athletics and issues associated with intercollegiate athletes. Clients include universities, athletic conferences, foundations, media outlets, and other private sector concerns. A complete range of services is available to include: survey instrument design, sampling, data collection, data reduction and analysis, summary report of findings.

**Center for the Study of Women in Television and Film**

**Martha M. Lauzen, Director**

The Center for the Study of Women in Television and Film is the nation's first program dedicated solely to the study and discussion of women's representation on screen and behind the scenes in television and film. The purpose of the center is to 1) engage students, faculty, and individuals working in the industry in an on-going discussion regarding the portrayals of girls and women in television and film and women's employment behind the scenes; 2) heighten the profile of women's representation in television and film as a public policy issue and concern; 3) train the next generation of scholars to analyze media images of women, and; 4) conduct an expanded agenda of original research on women's representation in television and film that has both practical and theoretical import.

For more information, contact Martha M. Lauzen, 619- 594-6301, [lauzen@mail.sdsu.edu](mailto:lauzen@mail.sdsu.edu).

**Sycuan Institute on Tribal Gaming**

**Randy Baker, Director**

The Sycuan Institute on Tribal Gaming focuses on research, policy studies, and education related to the area of tribal gaming management. The institute, centered in the largest tribal gaming community in the world, is geared to studying tribal gaming within the broader industry of hospitality and tourism management. The functions of the institute include 1) the conduct of timely and innovative research in tribal gaming such as governance, community and regional impact, marketing, tribal gaming operations, trends, etc.; 2) the collection of benchmarking data in order to develop "best practices" in tribal gaming; 3) the creation of an annual summit on tribal gaming that addresses policy, regulatory issues, trends, social issues, etc.; 4) the implementation of an annual community lecture or symposium on topics geared to informing and engaging the community about tribal issues and community conflicts; and 5) educating students, professionals, tribal personnel, and interested others for positions in the tribal gaming industry. The institute will facilitate the involvement of faculty with expertise from a variety of disciplines such as mathematics, computer science, policy studies, business, marketing, and public relations in the process of creating and disseminating new knowledge in the area of tribal gaming. The institute is managed and operated by the School of Hospitality and Tourism Management at SDSU and supported by an endowment from the Sycuan Tribal Council of the Kumeyaay Indians.

**Center for the Visual and Performing Arts**

The Center for the Visual and Performing Arts initiates and supports nationally and internationally recognized arts programs that inspire, engage, and enrich the university and the region through residencies, artistic alliances, and collaboration. Through grant support, the center:

- Integrates the arts on campus by designing collaborative courses across the arts and other disciplines.
- Brings internationally known artists to perform and exhibit, to conduct master classes and workshops, and to offer lectures to students, faculty, and the San Diego arts community.
- Initiates outreach programs throughout the community.
- Explores important issues and themes through educational opportunities, business forums, and artistic research.

The Web site is

[http://psfa.sdsu.edu/centers\\_and\\_institutes/visual.html](http://psfa.sdsu.edu/centers_and_institutes/visual.html).

**College of Sciences**

**Edwin C. Allison Center for Earth System History**

**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 Earth System History 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 climate change and biodiversity, arguably 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. The Web site is <http://www.geology.sdsu.edu/facilities/allisonctr/>.

### **Center for Behavioral and Community Health Studies (BACH)**

**John P. Elder, Director**

**Terry L. Conway, Linda C. Gallo, Joni A. Mayer, and Gregory A. Talavera, Associate Directors**

The Center for Behavioral and Community Health Studies (BACH) 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 ten 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 the San Ysidro Health Center, the City of San Diego Parks and Recreation Department, Casa Familiar, the MAAC Project, 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 experiences to diverse students who intend to pursue related careers and offers opportunities for project staff and graduate students to participate in community interventions. The Web site is

<http://behavioralhealth.sdsu.edu/frontpage.html>.

### **Center for Behavioral Teratology (CBT)**

**Edward P. Riley, Director**

**Sarah N. Mattson, Associate 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 as well as the study of other birth defects and disorders. 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, 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. The Web site is <http://www.sci.sdsu.edu/CMI/>.

### **Computational Science Research Center (CSRC)**

**José E. Castillo, Director**

**Andrew L. Cooksy, Eugene A. Olevsky, and Paul J. Paolini, 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; 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 619-594-3430,

<http://www.sci.sdsu.edu/csirc>.

### **Center for Energy Studies (CES)**

**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 greater San Diego 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 CES 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. The CES is closely integrated with the Environmental Sciences Program, which offers a Bachelor of Science degree through the College of Sciences. The CES 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. For more information call the CES at 619-594 1354.

### **Field Stations Program**

**Matthew Rahn, Director**

The Field Stations Program provides 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 Stations Program 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 Chihuahua 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, hydro-geology, 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 Stations Program at 619-594-0580. Inquiries can also be made through the SDSU Field Stations 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 Homeland Security Technology Assessment**

**Robert W. Welty and Eric G. Frost, Co-Directors**

The Center for Homeland Security Technology Assessment (CHSTA) provides an opportunity to promote ongoing homeland security efforts at SDSU and to facilitate interactions with other groups working in related areas under the umbrella of the Institute for Public Security and Health. The center is a campus-wide research, education, and outreach effort focused on technologies useful for protection

against human-generated and natural disasters in the US and countries around the world. The center assesses various technologies to assist first responders and decision makers by providing an unbiased approach for review, testing, and implementation of technological developments. The center works with the community to solve and coordinate solutions to regional issues, and regularly participates in regional homeland security efforts. The center also considers policy issues specifically linked to technologies to promote public safety within constitutional and legal guidelines.

The center promotes collaborations between faculty, staff, and students at SDSU and other universities and agencies to facilitate the development, assessment, and application of new technologies for use in homeland security. CHSTA is particularly focused on technologies such as telecommunications, visualization, optical and wireless networks, sensor networks, and geospatial mapping to provide inputs into large-scale data analysis and situational awareness functionality, which are required to build larger decision-support and collaboration systems. These applications provide practical solutions to communication, security, surveillance, imaging, database, and data-fusion problems. By integrating technology with language, culture, history, and public policy, the center also helps guide decision makers in the appropriate use of technology and appropriate understanding of vulnerabilities and risks, as well as the complex nature of real-world solutions to security issues. These resources are used to rapidly respond to natural disasters such as earthquakes, tsunamis, hurricanes, fires, and floods on a global basis. They are also useful for building sustainable solutions for avoiding man-made and natural disasters and accelerating business, enhancing the quality of life, and providing international cooperation and educational opportunities.

**Center for Information Technology and Infrastructure**

**Eric G. Frost and Robert W. Welty, Co-Directors**

The Center for Information Technology and Infrastructure (CITI) was established to promote the vision of transforming and empowering SDSU to take advantage of emerging tools in optical networking, wireless communication, and human-computer interactions through visualization. It nurtures new technologies, builds on existing efforts in environmental monitoring, student safety, transportation studies, law enforcement and first responder interaction, homeland security, collaborative education, Internet technologies, GIS systems, and other high interest areas. Activities extend to many sectors of the community (government, business, academia, non-profit organizations, private citizens) and among different jurisdictions within the region.

CITI is a product of the efforts of the SDSU Visualization Center resulting from community exercise development and participation. Its infrastructure exists in the form of hardware, software, facilities, people, and relationships. Many of these resources were informally gathered through the efforts of the SDSU Viz Center, the SDSU Research Foundation, and relationships with corporations. SDSU has actively collaborated and established partnerships with other academic and medical institutions, law enforcement and military agencies, local, state and federal governmental agencies, and high technology corporations. The center's continuing involvement in community exercises and organizations also results in a strong, collaborative relationship with regional law enforcement and first responder agencies. These efforts promote additional research, resulting in increased awareness and understanding, a higher state of preparedness, and greater safety for our residents across the region.

CITI pursues four major themes, which provide framework for the center and a pathway for diverse projects: homeland security; natural disaster mitigation and response; global sharing of information and collaborative visualizations; and remote sensing and environmental monitoring. The Web site is <http://citi.sdsu.edu/>.

**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/>.

### **Center for Research in Mathematics and Science Education (CRMSE)**

**Ricardo B. Nemirovsky, 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, mathematics and statistics, physics, policy studies in language and cross-cultural education, psychology, and teacher education. CRMSE is administered by a director and an associate director, who are appointed by the deans of the Colleges of Sciences and Education, in consultation with CRMSE members. 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 houses 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 main office of the center is located at 6475 Alvarado Road, Suite 206, San Diego, CA 92120-5013; telephone 619-594- \* &( \*; campus mail code 1862. The Web site is

<http://www.sci.sdsu.edu/CRMSE/>.

### **Center for Microbial Sciences**

**Anca M. Segall, Director**

**Stanley R. Maloy, Associate Director**

The Center for Microbial Sciences is a 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 to 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. The Web site is <http://www.sci.sdsu.edu/~smaloy/CMS/>.

### **Microchemical Core Facility (MCF)**

**Joan Chen, Director**

**Forest L. Rohwer and Robert W. Zeller, Co-Directors**

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 state-of-the-art facility that provides DNA sequencing and purification services for cell and molecular biologists associated with any of the 23 CSU campuses. In addition, the MCF provides for CSU faculty access to the most recent advances in computer-assisted analyses of molecular structure. Located on the third floor of the Chemical Sciences Laboratory building and managed by the Department of Biology, 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. The Web site is [http://www.sci.sdsu.edu/dnacre/sdsu\\_dnacre.html](http://www.sci.sdsu.edu/dnacre/sdsu_dnacre.html).

### **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, Chemistry and Biochemistry, 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; 619-5945655. The M.S. degree web site is <http://www.bio.sdsu.edu/cmb/masters.html>.

### **Visualization Center**

**Eric G. Frost and Robert W. Welty, Co-Directors**

The SDSU Visualization Center (Viz Center) uses computer visualization and communications to bear on societal problems. The Viz Center is focused on processing and providing data sets to the world for humanitarian assistance disaster relief (HADR) events such as earthquakes, tsunamis, volcanoes, wildfires; as well as poverty, sustainable resources, and first responders in their daily efforts to serve the public. The focus is on being a connecting resource between the campus, community, and the world in bringing together solutions to problems that information technology, imaging, data fusion, visualization, and decision support can assist.

The Viz Center develops and deploys tools for homeland security and works closely with many of the homeland security academic and research groups on campus, at the SDSU Research Foundation (SDSURF), and regionally. The Viz Center provides the physical laboratory function for a DHS multi-year, grant-funded project to the SDSURF Regional Technology Center for the assessment of homeland security technologies, governance structures, and data needs on a regional basis. This effort has led to establishment of a national presence as SDSU becomes a leader in addressing homeland security issues. The Viz Center also collaborates with other institutions in Indonesia, China, Mexico, Africa, Australia, Canada, and Central Asia. We interact with companies to help deploy and develop technologies, especially for response to "all hazards" events.

## Regulatory Compliance

### 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 the Division of Research Affairs, 619-594-5938. The Web site is

<http://gra.sdsu.edu/research/coi>.

### 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 Division of Research Affairs 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. The Web site is

<http://gra.sdsu.edu/research/iacuc>.

### 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 Affairs provides administrative support to the IBC. The IBC membership is determined based on federal guidance and includes a biosafety officer, a veterinarian, scientists, and community members.

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 at 619-594-2865. For information specific to the Institutional Biosafety Committee, contact the Division of Research Affairs, 619-594-0905 or e-mail [ibc@mail.sdsu.edu](mailto:ibc@mail.sdsu.edu). The Web site is

<http://gra.sdsu.edu/research/ibc>.

### 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 Federalwide 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 Affairs provides administrative support to the IRB. For general information, application procedures, guidance on ethical practices, and submission deadlines visit the Web site at <http://gra.sdsu.edu/research/irb>, e-mail [irb@mail.sdsu.edu](mailto:irb@mail.sdsu.edu), or call 619-594-6622.

## Research Promotion

### Albert W. Johnson University Research Lecture

Sponsored by the University Research Council and Graduate and Research Affairs, the Albert W. Johnson University Research Lecture-ship 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 W. Ball, Professor of Anthropology; Dr. Alvin Coox, Professor of History; Drs. James Flood and Diane K. Lapp, Professors of Education; Dr. Maurice S. Friedman, Professor of Religious Studies; Dr. Arthur Getis, The Stephen and Mary Birch Foundation Chair in Geographical Study; Dr. Dipak K. Gupta, Professor of Political Science; 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 P. Riley, Professor of Psychology; Dr. Melbourne F. Hovell, Professor of Public Health; Dr. William G. Tong, Professor of Chemistry and Biochemistry; Dr. Eugene A. Olevsky, Professor of Mechanical Engineering; Dr. Walter C. Oechel, Professor of Biology; and Dr. Mark A. Sussman, Professor of Biology. The Web site is

<http://gra.sdsu.edu/research/lectures>.

### University Grants Program

The University Grants Program (UGP) was created to integrate three independent funding mechanisms through which faculty derive internal support for creative and scholarly research. These internal funding sources include: Research, Scholarship, and Creative Activity (RSCA) awards, the Faculty Development Program (FDP), and Faculty Grant-in-Aid for Research (GIA). The Division of Research Affairs administers the UGP. For more information, contact the Division of Research Affairs at 619-594-5938 or visit the the Web site at

<http://gra.sdsu.edu/research/ugg>.

### University Copyrights and Patents Committee

The University Copyrights and Patents Committee (UCPC), a standing committee of the University Research Council, is charged with implementing the provisions of the copyrights, trademarks, and trade secrets policy, reviewing disclosures and declarations to ascertain the extent of institutional support involved in the completion of intellectual properties and make recommendations to the vice president for research of assignment of ownership rights and division of royalties. For more information about the UCPC and the SDSU policy, see the intellectual properties section of the Web site at

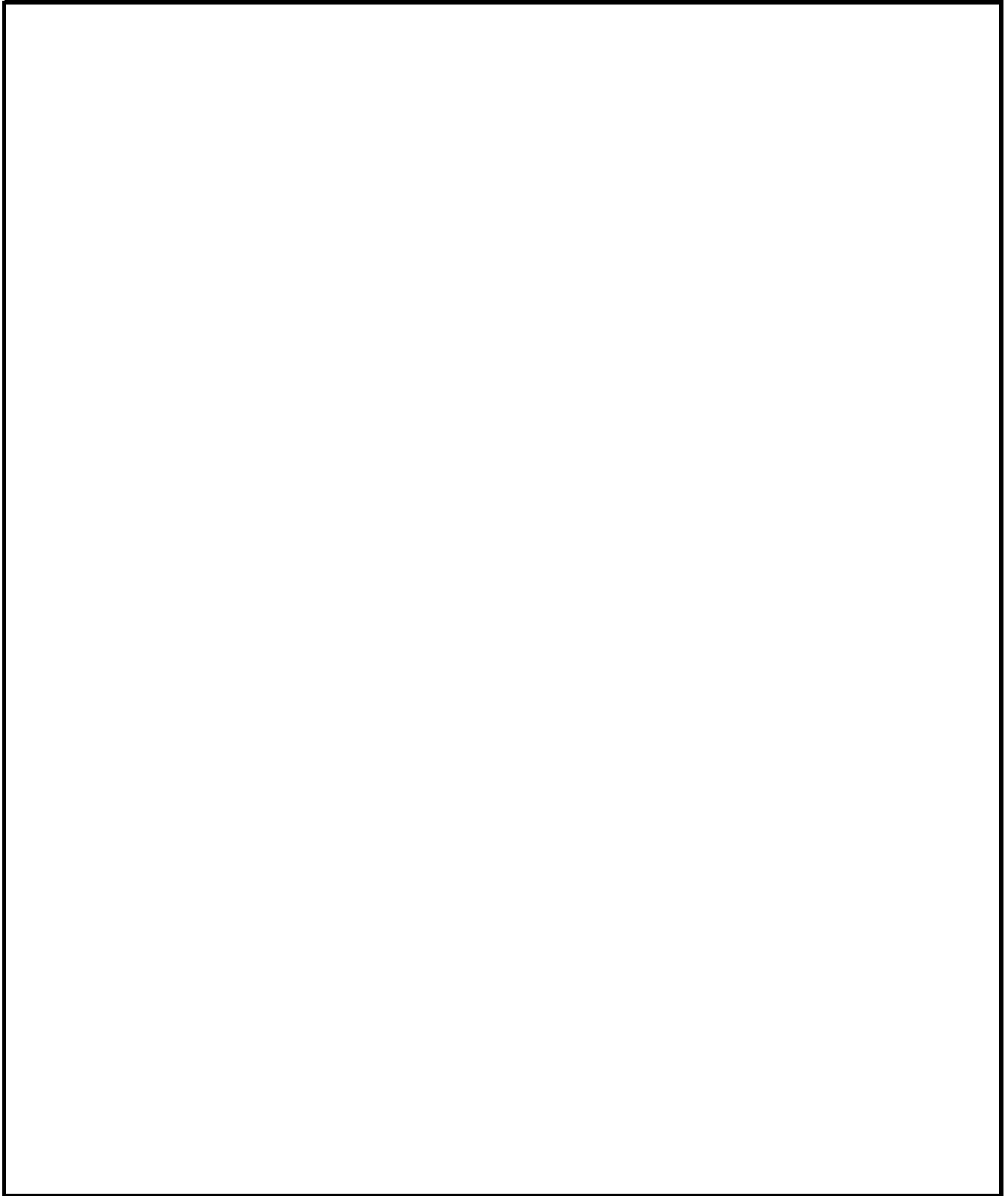
<http://gra.sdsu.edu/research/intellectualproperty/>.

### Student Research Committee

The Student Research Committee (SRC) is responsible for planning the annual Student Research Symposium (SRS) to showcase student research, scholarship, and creative activities. For more information, visit the Web site at <http://gra.sdsu.edu/research/studentresearch>.

### 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 Research Foundation. For more information, call 619-594-0516 or visit the TTO Web site at <http://tto.sdsu.edu>.





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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:

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 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 Accreditation of Healthcare Management  
Education  
2000 14th Street North, Suite 780  
Arlington, VA 22201  
703-894-0960

Commission on Collegiate Nursing Education  
One Dupont Circle, N.W., Suite 530  
Washington, D.C. 20036-1120  
202-887-6791

Computing Accreditation Commission of ABET, Inc.  
(Computer Science)  
111 Market Place, Suite 1050  
Baltimore, MD 21202-4012  
410-347-7700

Council of Graduate Schools  
One Dupont Circle, N.W., Suite 430  
Washington, D.C. 20036-1173  
202-223-3791

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>

Foundation for Interior Design Education Research  
146 Monroe Center NW, #1318  
Grand Rapids, MI 49503-2822  
616-458-0400, <http://www.fider.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 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 engineering, civil engineering, computer engineering, electrical engineering, environmental engineering 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.

The undergraduate program in Athletic Training in the School of Exercise and Nutritional Sciences is accredited by the Commission on Accreditation of Athletic Training Education, 2201 Double Creek Drive, Suite 5006, Round Rock, TX 78664, 512-733-9700, [www.caate.net](http://www.caate.net).

Foods and Nutrition, the Didactic Program in Dietetics in the School of Exercise and Nutritional Sciences is approved by the Commission on Accreditation of Dietetics Education, American Dietetic Association, 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6995, 800-877-1600, [www.eatright.org/cps/rde/xchg/ada/hs.xsl/CADE.html](http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/CADE.html).

## Library and Information Access

Located in the heart of the SDSU campus, Library and Information Access supports the research and curricular needs of the university community through the development of collections and the provision of services designed to facilitate access to information. Voted the best library in San Diego by *San Diego Magazine*, the library was described as "friendly, accessible, modern and usually packed with good-looking, hard-working young people." A new wing for the library was dedicated in 1996, adding a striking library "dome," which quickly became a landmark on campus. The facility itself has become the intellectual hub for the SDSU campus community, each year offering over 500 talks, lectures, tours, and a dozen exhibits. Spanning more than 500,000 square feet, with more than 3,000 seats for study and research, the library's importance to students, faculty, staff, and individuals living in the San Diego region is documented by more than 2.6 million annual visits.

### Access

The library is open to the public 24-hours per day, except on holidays, recess dates, and between 1:00 a.m.-7:00 a.m., when access is restricted to SDSU students and affiliates. The library's Web site at <http://infodome.sdsu.edu/> provides access, within the library and remotely, to the library's catalog, electronic books, over 79,301 electronic resources. 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 libraries through Circuit and Link+.

The library's Information Systems and Technology group provides computer accounts to all students and hosts World Wide Web pages for students, the university and the library. It operates one of the largest computer labs in the country with over 700+ computers with Internet/World Wide Web access. Up-to-date computing resources include a student computing help desk and wireless networking throughout the library.

The library has a comprehensive instruction program, which includes course-related instruction and tours. Librarians provide research assistance in person, by telephone, e-mail and by online chat. Service desks are located in: Circulation, Reference Services, Media Center, Current Periodicals and Microforms Center, Reserve Book Room, and Special Collections.

## Holdings

The library's holdings include 1,701,793 monographs and bound periodicals; 627,718 government documents; 4,502,844 microforms; 141,503 maps; 21,975 sound and video recordings; and 5,924 linear feet of archival papers. The library receives 79,301 periodical and serial titles, including government publications. It is a depository for United States and California government publications, and holds selected United Nations publications.

### Special Collections and University Archives

This department houses rare, fine, unique and valuable books, periodicals, manuscripts, and documents which require security and care in handling. The collections consist of approximately 37,000 volumes, 270 archival collections, and 369,000 other items, such as photographs, art prints, postcards, memorabilia, etchings, and oral histories.

## Academic Computing

The SDSU computing environment provides access to scores of software products including World Wide Web browsers, programming languages, wordprocessing, spreadsheets, presentation packages, relational databases, statistical software, and large databases such as IMF and CRSP. The university provides access to a Sun SunFire 4900 Server (running Solaris). The Sun F4900 Server is available to the university community via the campus network which also links students to specialty computing centers located at other California State Universities.

The university has over 2,000 microcomputers 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 the Student Computer Center located in Love Library 200 which has PCs, Macintoshes, and laser printing as well as the Social Science Research Lab located in PSFA 140 which has PCs, Macintoshes, 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 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.

Web site is available at <http://www.sdsu.edu>.

## Instructional Technology Services

Instructional Technology Services (ITS) 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; checkout of media and equipment for classroom use; online access to an instructional media collection containing more than 8,000 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 cable television system; operation of video-conferencing 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 ITS Learning Research Studio is designed to support faculty who wish to experiment with teaching strategies involving the use of new and emerging instructional technologies. It is a location on campus for conducting research aimed at measuring and documenting the use of technological tools to improve teaching and learning.

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 methods; facilitating course design; 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, courseware development specialists are available to assist faculty with the Blackboard web-based learning management system as well as the Horizon Wimba web Conferencing 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 Research Foundation

The San Diego State University Research 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 Research 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;
- 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 Research 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 Research 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.

### 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 of the university), provides scholarships for students, organizes Homecoming, provides input regarding university programs and policies, and provides excellent networking opportunities through a myriad of events.

For further information call the Alumni Office at 619-594-2586 or visit <http://www.sdsualumni.org>.

### Associated Students of San Diego State University

For over 75 years, the Associated Students of San Diego State University (A.S.) has served as 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 college representative per 1500 students, five executive officers, and representatives from 16 student organizations, the Council is responsible for the A.S. \$21 million annual budget and for formulating organizational and university-wide 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 collaborating with administration on university policies, programs, and services; appointments to educational or campus-related committees; lobbying to provide student input to city, county, state, and federal governments; and working to do what is best for SDSU students. Call 619-594-6555 for more details about student government programs or visit <http://www.as.sdsu.edu/govt>.

**Aztec Center Student Union.** Aztec Center Student Union serves as the heart of student activity and the community center of SDSU. This facility has several meeting and conference rooms, study areas, the Bowling and Games Center, and is home to AS government affairs and business offices. A variety of convenient campus services are available including Starbucks Coffee, Food Court, STA Travel, SDSU Card Office, USE Credit Union, Ticket Office, Meeting Services, and the University Information Center. Montezuma Lounge offers a quiet place to study, relax, meet friends or use free computers. Visit the Cross-Cultural Center, Government Affairs office, or one of several student organizations to get involved. A wide variety of free entertainment including movies, lectures, and noontime concerts are offered throughout the academic semesters. Aztec Center, in partnership with Aztec Shops, Ltd., also provides a Satellite Cyber Lounge located in West Commons with free computer use. A major renovation and expansion is scheduled for Aztec Center that will greatly improve amenities and the quality of campus life for students. For more information, call 619-594-6551 or visit <http://www.aztec-center.sdsu.edu>.

**Cox Arena.** Home to Aztec Men's and Women's Basketball, Cox Arena is San Diego's premier venue for everything from concerts to sporting events, family shows, conventions, conference, and corporate events. Facilities and Event Management has awarded Cox Arena the prestigious Prime Site Award for nine consecutive years.

This state-of-the-art, 12,000 seat facility is complete with award winning acoustics, VIP lounges, and star dressing rooms, as well as a distinctive outdoor concourse area. On site is a full-service ticket 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 4,000 vehicles. Call 619-594-0234 or visit <http://www.cox-arena.com>.

**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, group exercise, dance, and weight rooms; a TV lounge area; plus locker rooms with full towel service and saunas. Membership includes unlimited access to recreation facilities, group exercise, cardio and weight rooms, racquetball, wallyball, intramural sports, aquatics, and bowling. Additional programming is offered at minimal fees with a wide variety of rec classes such as the tai chi, dance, health and fitness, martial arts, tennis, and rock climbing. Membership fees start at only \$17.00 per month for students. The facility is open 24 hours per day. Call 619-594-PLAY for complete schedules and membership information or visit <http://www.arc.sdsu.edu>.

**Aztec Aquaplex.** Another extension to the Aztec Recreation Center (ARC), the Aztec Aquaplex provides SDSU students with a new state-of-the-art pool facility to serve the recreational, educational, and athletic needs of the SDSU campus. The facility is located adjacent to the Tony Gwynn baseball stadium on the western edge of campus. The complex includes three heated pools; an Olympic 50-meter pool for lap swimming and diving; a 7,300 square foot recreation pool with a zero-edge gutter and beach entry for aquatic-based group exercise classes (aqua-aerobics), recreational swimming and water volleyball/basketball. The third pool is a 20-person hydrotherapy spa for students looking to soak and relax. Active members of the Aztec Recreation Center (ARC) receive entrance privileges into the new pool facility. Non-ARC members will pay a small daily entry fee or purchase a pool-only membership. For more information call 619-594-SWIM or visit <http://www.arc.sdsu.edu>.

**Aztec Center Bowling and Games.** This recently renovated facility includes 12 bowling lanes, 30 video games, billiards, table tennis, and leagues. Also available for parties. Call 619-594-6561 or visit <http://www.arc.sdsu.edu>.

**Mission Bay Aquatic Center.** The Mission Bay Aquatic Center, located at 1001 Santa Clara Point in Mission Beach, is the university waterfront facility offering students credit and recreational watersports classes, rentals, special events, and jobs for qualified candidates. It is one of the few programs in the world where students can earn university credit in wakeboarding, waterskiing, surfing, kayaking, sailing, rowing, or wind-surfing. Getting to the MBAC is easy by car or by the San Diego Trolley Green Line to San Diego Transit Route 8. Call 858-488-1000 or visit

<http://www.missionbayaquaticcenter.com>.

**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-PLAY for more information and trip schedules or visit

<http://www.aztecadventures.sdsu.edu>.

**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 or visit <http://www.arc.sdsu.edu>.

**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 or visit <http://www.arc.sdsu.edu>.

**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 or visit <http://www.sdsu.edu/as/child>.

**Open Air Theater and Entertainment.** Located amidst the original landscaping of San Diego State University, this historic venue is ideal for watching your favorite musical group while sitting under the stars. Originally opened in 1941, this 4,800 seat amphitheatre has played host to sold out concerts, lectures, and symphony performances. Generations of guest have enjoyed this theatre's natural acoustics which complement the sound of all music genres. On site are full-service concession stands and a two-level hospitality suite, equipped with open balconies and dressing rooms. For event information, call the Aztec Center Ticket Office at 619-594-6947 or visit <http://www.cox-arena.com>.

## 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 crew, men's soccer, and water polo compete in the 9-member Mountain West Conference. Crew is a member of the Western Intercollegiate Rowing Association (WIRA); men's soccer is a member of the Pac10 Conference; and water polo is a member of the Mountain Pacific Sports Federation (MPSF).

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. 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.

**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 a full-service computer hardware and software department that 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 or visit <http://www.sdsu bookstore.com>.

**SDSU 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 Sub Connection and Vinnie's Gourmet Italian Deli in East Commons. We also contract with other restaurant operators such as Rubio's and Panda Express to provide quality food and service on campus. In addition to the varied restaurant options, Aztec Shops operates six 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. SDSU Dining Services' Catering Department is the recognized caterer for all events on the SDSU campus. For more information, call 619-594-7640 or visit <http://www.eatatsdsu.com>.

**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. Renamed University Towers, the facility is home to more than 500 students during the academic year.

**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. Any such data provided must be in a form that does not allow for the identification of any individual student. 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**

**Telephone: 619-594-6851**

**<http://career.sdsu.edu>**

Career Services serves as the central campus resource for career development, planning, and employment opportunities. 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 the 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 online 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.

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 *Graduate Bulletin* 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>.

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 and Psychological Services (C&PS)

Calpulli Center, Room 4401

Telephone: 619-594-5220

<http://www.sdsu.edu/cps>

Counseling and Psychological Services (C&PS) provides a variety of services to enrolled SDSU students.

The Alpha Chamber "Egg Chair" can teach your body and mind to relax. The "Egg Chair" provides an environment where students experience deep relaxation, both mentally and physically.

Individual counseling services are designed for students who can benefit from short-term therapy. Often, a few individual meetings with a therapist can help better identify, understand, and resolve emotional barriers that may be interfering with personal well-being and academic success. These confidential services are for SDSU students at no cost. If a student's situation requires longer-term therapy, referrals can be made to off-campus resources.

C&PS groups and workshops address issues common to most university students. As appropriate, students are encouraged to participate in these interactive and dynamic forums:

- Alcoholics Anonymous
- Building Self-Esteem
- Communication Skills
- Grief and Loss
- Managing and Expressing Strong Feelings
- Managing Depression
- Managing Test Anxiety
- Relationship Skills
- Resilience
- Stress Management
- Substance Use/Abuse

Telephone consultation services may also be provided. If a student has a personal concern, or is concerned about a friend, a therapist will talk directly with the student by telephone for a brief consultation. This conversation will allow the therapist to hear concerns and help identify the best way to help. Faculty and staff may also avail themselves of this service when concerned about a student. Therapists are generally available during business hours from 9:30 to 4:00, with the exception of the noon hour. Referrals to San Diego's free 24-hour counseling access line at 1-800-479-3339 are also provided.

Crisis intervention services are also available at C&PS. For students who are in need of immediate assistance because of a severe emotional crisis that may be life threatening, or otherwise require immediate attention, urgent appointments may be provided. Examples of urgent situations may include: thinking about suicide, a recent victim of assault, grieving the recent loss of a friend or family member.

The Center for Well-Being offers resources designed to help students help themselves by exploring solutions to difficult personal or family issues. Resource topics, available in pamphlets, books, audio or video tapes, include: adult children of alcoholics, adults molested as children, assertiveness, coming out, concentration, depression, eating disorders, loneliness, motivation, relationships, self-confidence, sexual assault, stress reduction, suicide prevention, time management.

The C&PS peer educators offer students who are selected, trained and supervised an opportunity to provide peer education to other students. The C&PS student advisory board members provide advocacy for students' mental health needs, a service sponsored by SDSU Associated Students.

## 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.

### Housing Administration and Residential Education

6050 Montezuma Road  
Telephone: 619-594-5742  
<http://www.sdsu.edu/housing>

There are eight 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. The Emerald Isle complex is also offered to graduate students; there are studio, one- and two-bedroom units available. New for fall 2008, is a graduate/upper division fully furnished building at Aztec Corner. Leases are by bed space. These apartment complexes 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 residential education 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, mini-suite living at University Towers, or suite-style living in Cuicacalli Suites. Students needing housing over the breaks may select University Towers 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 may request a License Agreement contract by visiting <http://www.sdsu.edu/housing>.

### Intercultural Relations/ Cross-Cultural Center

Aztec Center, Room 202  
Telephone: 619-594-7057  
<http://www.sa.sdsu.edu/cc>

The Intercultural Relations/Cross-Cultural Center provides safe spaces and fosters intellectual inquiry, identity development, social change, and acceptance of all people and cultures. To this end, the center offers resources and programs to inspire a student-centered multicultural community.

### International Student Center (ISC)

International Student Center  
Telephone: 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 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, Intercultural Workshops, and International Film Festivals.

#### 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: [oiip@mail.sdsu.edu](mailto:oiip@mail.sdsu.edu) or visit our Web site at <http://oiip.sdsu.edu>.

#### 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 the CSU International Programs listing) 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 assists, in coordination with SDSU's Risk Management Program, that all SDSU students who study or travel in other countries 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.

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 1,400 students), ranking us in the top two institutions in the United States in our category (source: IIE 2006).

#### 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 20 countries, the International Programs also offers a wide selection of study locales and learning environments.

**Australia.** Griffith University, Macquarie University, Queensland University of Technology, University of Queensland, University of Western Sydney, Victoria University

**Canada.** The universities of the Province of Quebec including: Bishop's University, Concordia University, McGill University, Université Laval, Université de Montréal, Université du Québec system

**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 d'Etudes Françaises étudiants étrangers, L'Académie d'Aix-Marseille (Aix-en-Provence), Universités de Paris III, IV, V, VI, VII, VIII, IX, X, XI, XII, XIII, the Institute of Oriental Languages and Civilizations, and Université Evry

**Germany.** University of Tübingen and a number of institutions of higher education in the Federal State of Baden-Württemberg

**Ghana.** University of Ghana, Legon

**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)

**South Africa.** University of Kwazulu Natal, Nelson Mandela Metropolitan University

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

**Sweden.** Uppsala University

**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. Financial aid, with the exception of Federal Work-Study, is available to qualified students.

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 colleges. 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/>

## Ombudsman

### Student Services, Room 1105

Telephone: 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 that may best resolve the problem.

Examples of student complaints that 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 term) after the semester during which the student was allegedly aggrieved.

## Parking and Transportation

When possible, carpooling or use of alternate modes of transportation is recommended for the commute to campus.

Metropolitan Transit System's Green Line trolley and six bus routes (11, 13, 81, 115, 936, 955) conveniently connect the San Diego metropolitan area with service to the San Diego State University Trolley Station and Transit Center. Semester and monthly trolley and bus passes can be purchased at the Aztec Center Ticket Office.

Further information concerning Metropolitan Transit trolley and bus routes, fares, services, and SchoolPool carpool registration is available at 1-800-COMMUTE or

<http://www.sdmts.com> and <http://www.ridelink.org>.

On-campus parking is by permit only and overnight parking requires an additional permit. Purchase or possession of a parking permit does not guarantee a parking space; and, overnight parking is limited and available on a first come, first serve basis. Parking structures and surface lots are located on the perimeter of the campus, with the remote parking lots serviced by free shuttle vans weekday evenings (Monday through Thursday) during the academic year. Major events at Cox Arena may require parking location adjustment.

Visitors are directed to the Parking Information Booth at the College Avenue entrance to the campus for directions to several available pay parking lots. 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 Disability Services (SDS)

Calpulli Center, Room 3101

Telephone: 619-594-6473

TDD: 619-594-2929

<http://www.sdsu.edu/dss>

Student Disability 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 Student Disability Services.

Services available to SDS students include an 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, SDS offers special sections of classes aimed at helping students achieve academic success and fulfill university requirements. Rhetoric and Writing Studies 305W is designed to help students satisfy the upper division writing requirement. Rhetoric and Writing Studies 98A is designed to teach students effective test preparation, notetaking, and other strategies to help them improve their academic performance.

## Student Health Services

### Calpulli Center

Telephone: 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 certified primary care nurse practitioners; nursing, x-ray, and laboratory services; a pharmacy which dispenses prescriptions and over-the-counter items at cost; physical therapy, health-related counseling and campuswide health education programming offered by the Health Promotion Department. Students are responsible for the cost of their medical care.

### 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 immunization at a cost 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 red 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 8:30 a.m. to 4:30 p.m., Monday through Friday. 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 with the understanding that individuals with severe injuries will be transferred to the most appropriate medical facility. 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.

## Student Rights and Responsibilities

### Student Services, Room 1604

Telephone: 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 center 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>.

## Student Testing, Assessment and Research (STAAR)

Student Services, Room 2549

Telephone: 619-594-5216

FAX: 619-594-5036

<http://www.sa.sdsu.edu/testofc/index.html>

The Student Testing, Assessment and Research (STAAR) Office is an important resource for the entire university community, serving both students and faculty by administering and analyzing paper and pencil and computer-based tests for the purposes of admission, class placement, competency for graduation, licenses, and credentials. Test scoring and

analysis services are also provided for classroom tests. Additionally, 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 assesses 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 Student Testing, Assessment and Research Office will provide students with test dates and registration procedures for major national examinations in the form of a bulletin of information or with the address of the testing service. Reservations for computer-based tests can be made at the Student Testing, Assessment and Research Office, 619-594-0968. Students who are interested in assessments for counseling or career planning must contact Counseling & Psychological Services or Career Services respectively. Special arrangements for disabled students are made through Student Disability Services.

Although competency test requirements are monitored by various offices on campus, the Student Testing, Assessment and Research Office will attempt to assist students in signing up for the required examinations or refer them to the proper agency.

## Veterans Affairs

Students who are eligible for veterans, dependents, or reservists V.A. education benefits should visit SDSU's Veterans Affairs Office. The Veterans Affairs Office can offer assistance with applying for education benefits, coordinating the V.A. work study program, and processing tutorial assistance paperwork.

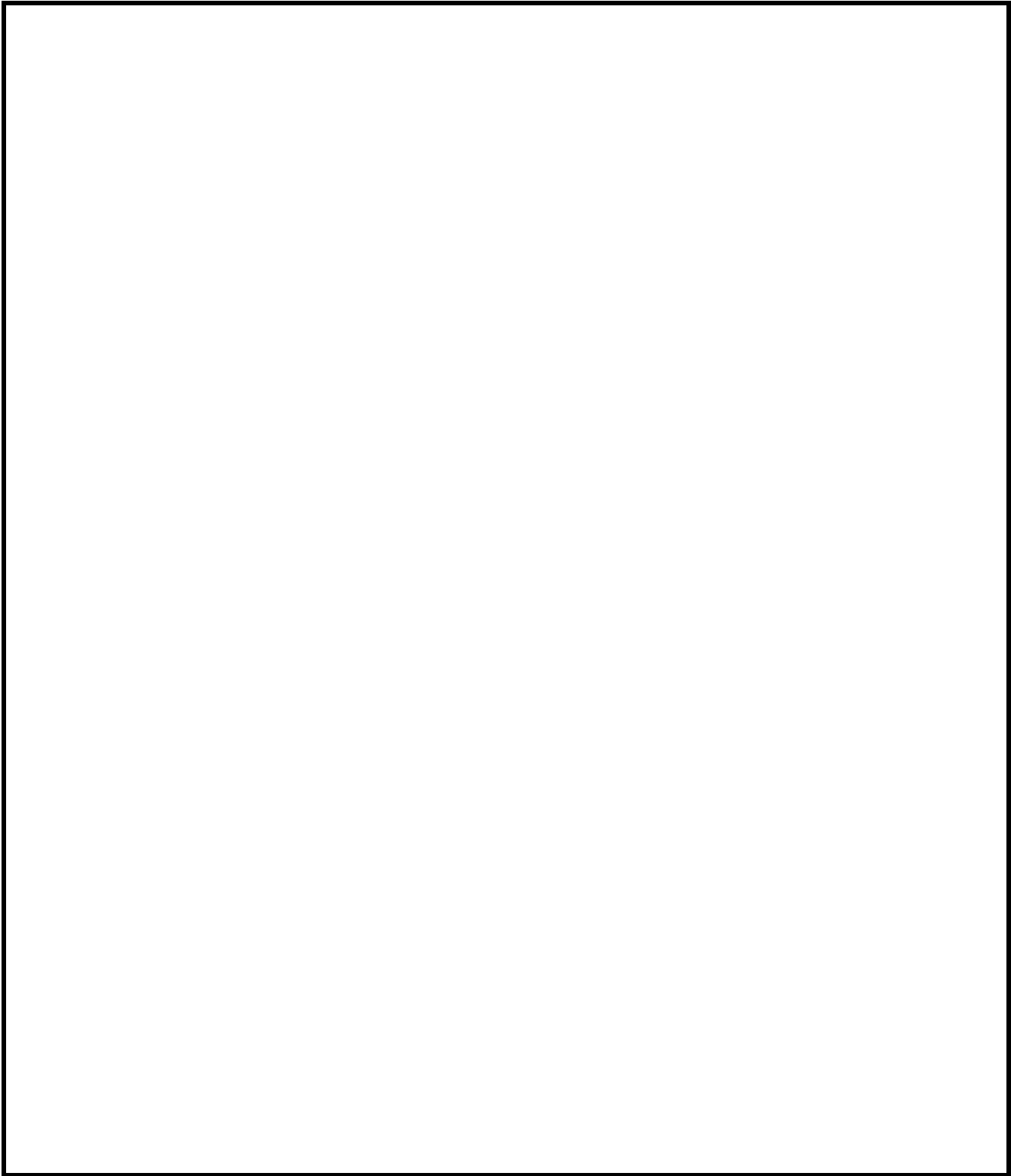
Students planning to attend SDSU should contact the Veterans Affairs Office two months before the beginning of the first semester to learn how to file for benefits. Students that miss the application deadline due to circumstances beyond their control (i.e. serving in the military active duty) should contact the Veterans Affairs Office or the Office of Admissions for information regarding petition appeal procedures.

The following educational benefits are available to veterans and dependents at SDSU:

- Chapter 30 (Montgomery GI Bill - Active Duty)
- Chapter 30 (Montgomery GI Bill - Currently Serving on Active Duty)
- Chapter 1606 (Montgomery GI Bill - Reservists)
- Chapter 1607 (Montgomery GI Bill - Reserve Educational Assistance Program)
- Chapter 31 (Vocational Rehabilitation)
- Chapter 35 (Dependents Educational Assistance)
- California Veterans Fee Waiver Program (Dependents of Veterans with a Service-Connected Disability)

Note that in order for a student to use their benefits while attending SDSU, the student must be a regularly matriculated student and all classes taken must be required for the educational objective selected.

For additional information please contact the Veterans Affairs Office, Student Services West, Room 1641, 619-594-5831, <http://www.sdsu.edu/registrar>. For information on the United States Department of Veterans Affairs see <http://www.gibill.va.gov>. For information of the fee waiver, contact the Cal Vet Fee Waiver Office at 619-531-4545.





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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 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 the divisions of Extension, Professional Development, American Language Institute, and Administrative Services. 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. Units earned through Open University are non-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 (80iBT/213 CBT, 6.5IELTS).
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

Matriculated graduate students may not enroll in courses through Open University.

Students who have not been admitted to the university may enroll in on-campus courses through Open University during the regular semester on a space available basis with the approval of the course instructor and the department chair. Courses taken through Open University prior to admission to the university may be transferred to meet graduate degree requirements with the approval of the graduate adviser and the graduate dean and are normally limited to nine units depending on the degree objective (see Transfer Credit).

Special Session programs are offered through the College of Extended Studies. A matriculated graduate student who is not in a special sessions program may only take courses through Special Session if the course is not being offered through the regular session, if the student must take the course as part of their program of study, and if the course will not be offered again prior to the student's planned graduation date. In these cases, if the student is taking regular session courses, he or she will have to pay special session fees and regular session fees given they are enrolled in the regular session.

### American Language Institute (ALI)

The American Language Institute offers noncredit intensive (18-25 hours per week) English programs throughout the year to students and professionals interested in improving their English proficiency. Students may request conditional acceptance to San Diego State University when they apply to the ALI. This is offered to those who do not have an adequate proficiency in English (80 iBT), but who otherwise qualify for admission to the university. Students who successfully complete the ALI's English for Academic Purposes program can request a TOEFL waiver, meaning that with positive recommendations they do not need a TOEFL score for admission to graduate or undergraduate programs at SDSU and several partner colleges.

Programs offered by the ALI are as follows:

#### English for Academic Purposes

An 11- to 18-week course for students planning to enter San Diego State or other colleges or universities at the graduate or undergraduate level. Classes are offered in academic reading, writing, grammar, listening/notetaking and 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. Students may also specialize in Pre-MBA preparation.

Highly advanced students may register for three to six units of SDSU courses in addition to their English classes. Also, students who meet the English proficiency requirement may register for nine to 12 units through ALI's Semester at SDSU program.

#### International English for Communication

A 3- to 19-week course designed for students and professionals at all levels who want to develop and improve their practical English skills for professional or personal reasons. Classes include eight hours of oral communication in addition to 12 hours of reading, writing, grammar, and listening per week. Elective courses are offered, and directed activities at SDSU and in the community provide experiences for language use. Students may specialize in Business for Global Practices (BGP), a non-credit practical program for professionals.

### TESL/TEFL Teacher Training and Certificate Programs

Teacher training programs include the amTEFL Certificate, for those with little or no previous English language teaching experience who would like to teach English abroad, and the TESL/TEFL Seminar for teachers with a minimum of one year of previous English language teaching experience.

### Customized Group Programs

The ALI can offer customized programs for special groups in fields such as business, teacher training, law, health care, sports medicine, English Language Study Tours for youth groups, and others. These are offered at our San Diego State University location or on-site in the home country.

### Services

All students at the institute are offered visa and immigration advising, housing assistance, organized group volunteer activities, field trips to popular tourist attractions, counseling for university entrance, health services and orientation to university life. Many SDSU campus facilities and activities are also available to ALI students.

For the most current and detailed information and to apply, please see the ALI Web site at <http://www.americanlanguage.org> or call 619-594-5907.

### Osher Lifelong Learning Institute

The Osher Lifelong Learning Institute offers instructor-led university inspired courses for people age 50 and better who are interested in meaningful intellectual and social engagement. Classes are held on the SDSU campus during the day and include courses in literature, science, history, music, current events, religion, sociology, and more. Courses are intellectually stimulating without the pressure of grades, tests, or papers. For more information call 619-594-2863, e-mail [osher@mail.sdsu.edu](mailto:osher@mail.sdsu.edu) or visit the Web site at

<http://www.neverstoplearning.net/osher>.

### Travel Study Programs

The college offers matriculated SDSU 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 Director of Travel Study Programs at 619-594-6398.

### Certificate Programs

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, and workshops. 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 online. For information on these courses visit the Web site at <http://www.neverstoplearning.net>. Some one-unit weekend courses 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 SDSU bachelor's degree requirements is 24 units. Courses offered through Extension that are not offered on campus or are not required in a student's program of study will appear on the SDSU transcript but are not transferable for graduate credit. Courses offered through Extension numbered 500-899 may be transferred with the approval of the graduate adviser and the dean of the Division of Graduate Affairs.

### Professional Development

The Division of Professional Development provides business and industry with certificates and workshops 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.

#### Certificates/Seminars/Workshops

Certificate programs provide career development to meet the needs of the workforce. Certificates are focused on topics relevant to key industry sectors and are recognized by most employees as a significant academic accomplishment.

Examples include casino gaming management, coaching, construction, contract management, human resources, hospitality, lean six sigma, marketing, personal fitness, and sales.

In addition, the division develops and coordinates 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, supervisory training, marketing, project management, and customer service issues related to global competitiveness.

#### Professional Development Online (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 customer service. These online programs typically consist of five to ten courses, and can be completed at the student's own pace.

#### Tailored 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 advisors 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 to the workplace.

## 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 unique 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: \$43,000.

### **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: \$30,000.

### **Master of Arts in Educational Technology**

This 36 unit program is available online. 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. Approximate cost: \$20,000.

### **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: \$20,000.

### **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, Coates, Elizondo, Fatemi, Hill, King, B., Medeiros, Merino, Polich, Ryan, Spencer, Varela Ibarra  
**Professors:** Amaral, Champion, Dunn, Garrison, Neumann, Reyes, Roeder, Ryan, Shumaker  
**Associate Professors:** Castañeda, Herrera, Ponce, Ramirez-Pimienta, Sabbath, Stampfl, Verzi  
**Assistant Professors:** Ajayi, Altamirano, Boime, Collins, Cordero, Rodriguez-Valls, Tuba, Yoo  
**Lecturers:** Fuentes, Hoyt, Livingston, Murphy

## 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 has two locations in the Imperial Valley: Calexico and Brawley. 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 60 transferable units from community colleges or other accredited institutions. In addition, the Imperial Valley Campus now offers, as part of its Freshman Scholars Program, first and second year undergraduate education to a select cohort of students planning to major in criminal justice administration, liberal studies, or psychology. The 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 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 Calexico 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 Division of Graduate Affairs 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 Teaching Credential, Multiple Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD): Spanish, Single Subject  
Specialist: Administrative Services  
Special Education: Mild/Moderate  
Moderate/Severe  
(Both in conjunction with the College of Education)

For further information on any of these degrees, see the SDSU – Imperial Valley Campus Bulletin.

## Exchange Programs and Study Abroad

Graduate and undergraduate students at the SDSU-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, Ecuador, Finland, France, Germany, Iran, Mexico, and Paraguay.

In addition to IVC's own international programs, students may participate in any international program at SDSU, including the California State University International Programs; the SDSU spring semester programs; or the International Student Exchange Program (ISEP) Consortia.

### Research Centers and Institute

#### California Center for Border and Regional Economic Studies (CCBRES)

Kimberly Collins, Director

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, California, Mexicali, Baja California, and the binational region. It publishes a bimonthly bulletin of indicators in the region along with in-house and sponsored analysis of border policy issues. Started in 1999, the center has created a resource for the region's residents and individuals interested in issues surrounding the U.S.-Mexican border. The center receives over 12,000 inquiries per year for information on the Imperial-Mexicali valleys.

In addition to the database and monthly bulletins, CCBRES conducts a number of sponsored research projects. The focus of recent research has included quality of life, air quality, environmental perceptions of local residents, the development of a system dynamics model for the binational region, and the capacity of governments on both sides of the border to manage air quality issues.

The center has hosted a number of conferences and workshops on border issues, ranging from trade and economics to environmental and educational issues. The center has been the primary organizer of the annual Imperial Valley Economic Development Summit. In the eighth year, this conference has been recognized as an annual, well-respected event with over 200 attendees each year. This event helps to highlight San Diego State University as a provider of high quality information on the region.

The center has provided national and international recognition to the Imperial Valley Campus of San Diego State University as a source for quality border research. The Imperial Valley Campus has been designated by the U.S. Department of Agriculture as one of eight National Centers of Excellence primarily based on the activities of CCBRES.

The center's Web site is <http://www.ccbres.sdsu.edu>, e-mail address is [kcollins@mail.sdsu.edu](mailto:kcollins@mail.sdsu.edu), telephone number is 760-768-5510, and FAX number is 760-768-5583.

#### Center for Individual and Professional Skills Development

Susanna Fuentes, Director

The Center for Individual and Professional Skills Development at San Diego State University-Imperial Valley Campus offers community programs to the Imperial and Mexicali valleys. The center presently offers English as a Second Language (ESL) in the local community and in Mexico, a teacher training program, business English for executives, and the computer and language training program. Additionally, the Center for Individual and Professional Skills Development presents annual conferences including the Bi-national Conference on Education and the Bi-national Youth Leadership Conference.

#### Desert Farming Institute

Stephen B. W. Roeder, Director

The Desert Farming Institute at the Imperial Valley Campus of San Diego State University has two distinct components. First, a research unit explores desert farming and its potential for improving the competitiveness of agriculture in the desert southwest. Of special interest are the introduction of new crops and growing crops under low water use conditions. The second unit of the institute is the Center for the Study of International Trade in Agriculture with the objective of studying international trade in agriculture and making the results available to California and Arizona farmers.

### 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 Steppling Art Gallery provide academic and cultural resources for the entire community. Other buildings include classroom buildings, the administration building, faculty offices, computer labs, 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. Brawley houses five classrooms, including one classroom with video conference capabilities, and one computer classroom.

The library, located at the Calexico site, 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

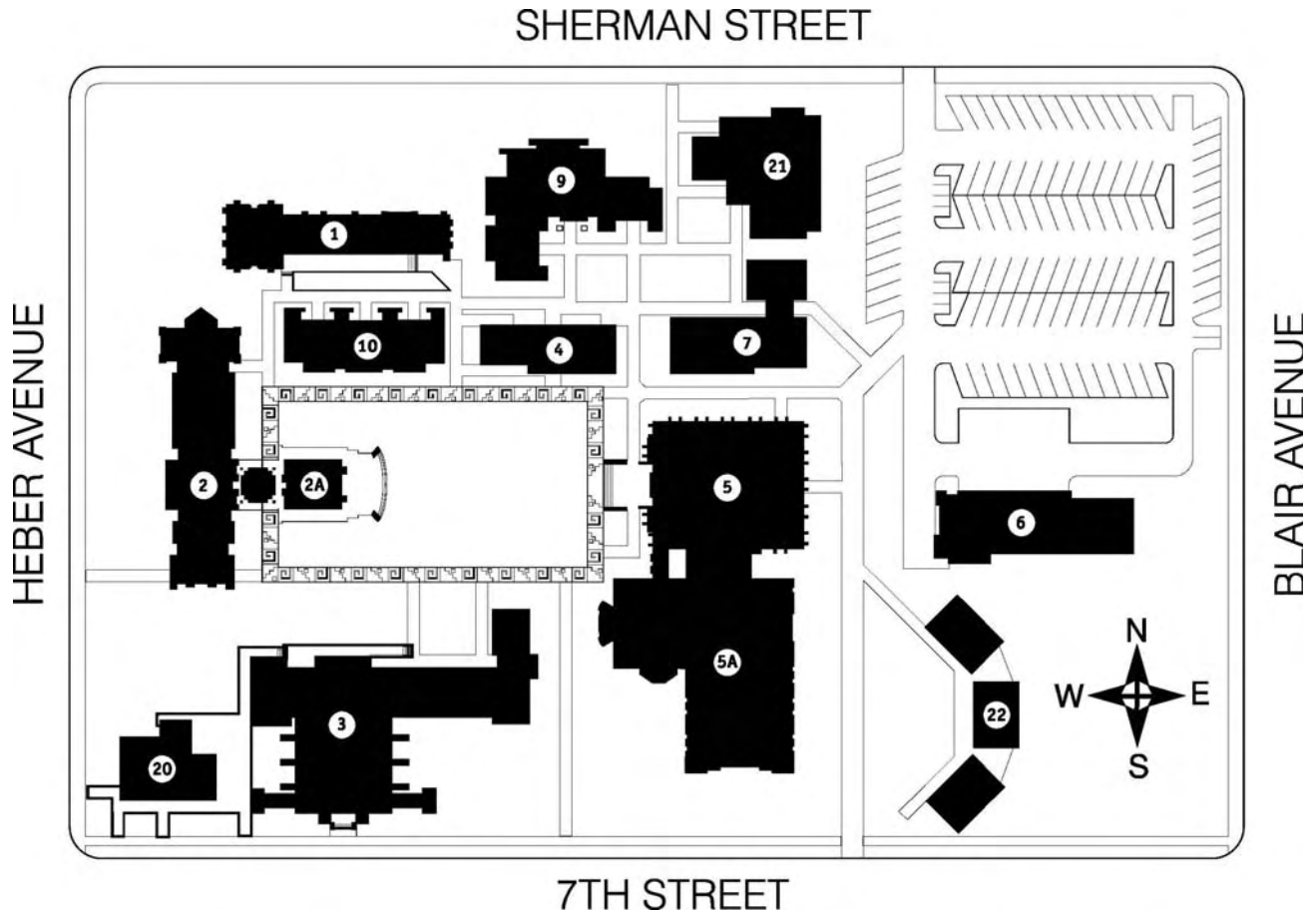
To apply for admission to the Imperial Valley Campus, students must file a complete application online through CSU Mentor at <http://www.csumentor.edu>. Official transcripts and test scores must be submitted to Graduate Admissions, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182-7416. Please telephone 760-768-5667 for further information. Students can register on the Internet using WebPortal but only after fees are paid. Late registration is allowed during the first three 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 – Calexico Campus Map

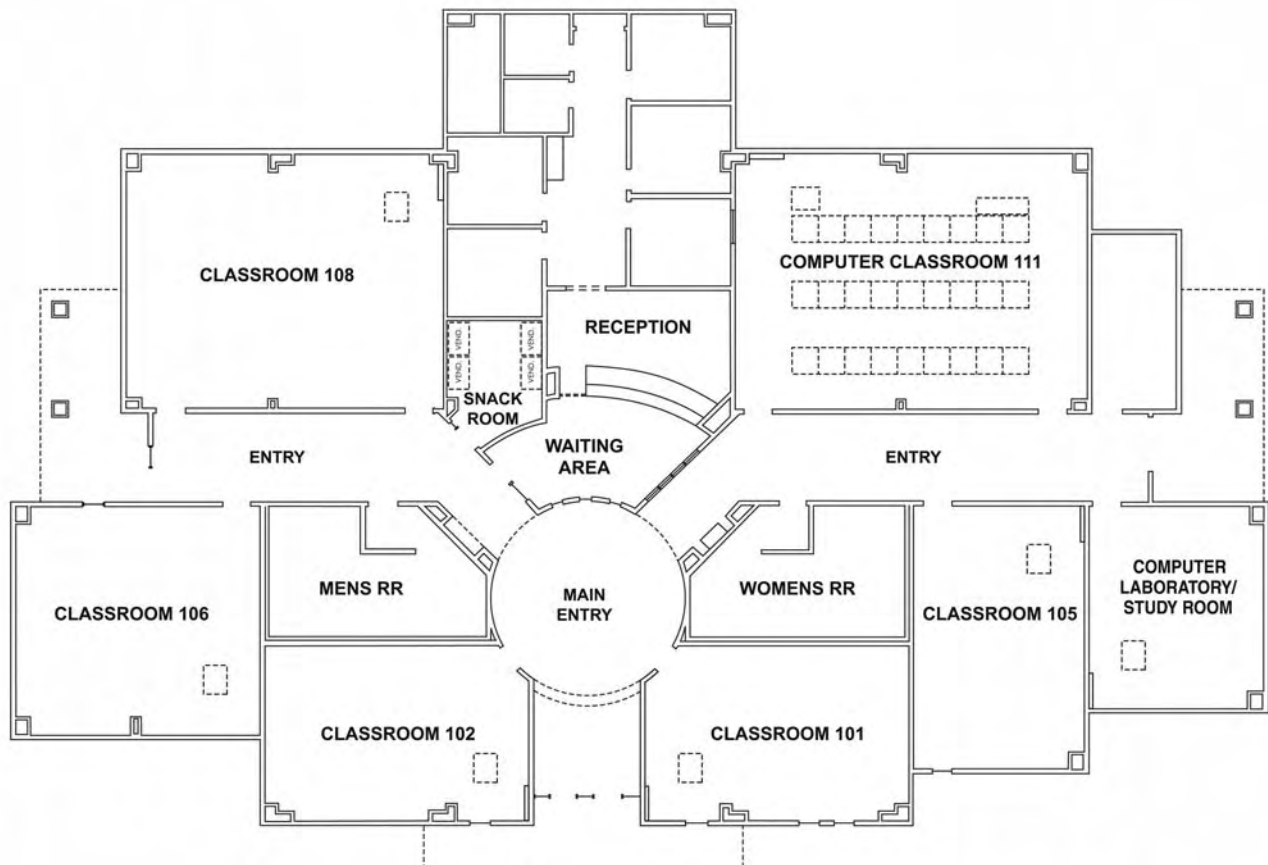


**SDSU IVC Campus – Calexico**  
**720 Heber Avenue**  
**Calexico, CA 92231**  
**760-768-5500**

**IMPERIAL VALLEY CAMPUS  
 BUILDING LEGEND**

- |   |  |  |
|---|--|--|
| <ul style="list-style-type: none"> <li>1. North Classroom Building<br/>(N-101, N-102, N-106, N-108)</li> <li>2. Administration Building (Administration/<br/>Academic Affairs/Business Office)</li> <li>2A. Art Gallery</li> <li>3. Auditorium/ Classrooms<br/>(A-3, LA-1, LA-2, LA-3, LA-4)</li> </ul> | <ul style="list-style-type: none"> <li>4. Classroom Building<br/>(C-7, C-8, C-9, C-10)</li> <li>5. Library</li> <li>5A. Library Addition</li> <li>6. Physical Plant</li> <li>7. Computer Building</li> </ul> | <ul style="list-style-type: none"> <li>9. Faculty Offices: Building East<br/>(Classrooms)</li> <li>10. Faculty Offices: Building West</li> <li>20. Student Center</li> <li>21. Student Affairs</li> <li>22. CLAT – Classrooms</li> </ul> |
|---|--|--|

Imperial Valley Campus – Brawley Campus Map



**SDSU IVC Campus – Brawley**  
**560 East Highway 78**  
**Brawley, CA 92227**  
**760-351-0806**

# 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 Academy, 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 system-wide 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 multi-purpose 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 limited number of doctoral degrees are offered jointly with the University of California and with private institutions in California. In 2005, the CSU was authorized to independently offer educational doctorate (Ed.D.) programs, and seven CSU campuses launched their Ed.D. programs in fall 2007.

Enrollments in fall 2005 totaled 417,000 students, who were taught by some 23,000 faculty. The system awards about half of the bachelor's degrees and a third of the master's degrees granted in California. Nearly 2.5 million persons have been graduated from CSU campuses since 1961.

## Average Support Cost Per Full-time Equivalent Student and Sources of Funds

The total support cost per full-time equivalent student includes the expenditures for current operations, including payments made to students in the form of financial aid, and all fully reimbursed programs contained in state appropriations. The average support cost is determined by dividing the total cost by the number of full-time equivalent students (FTES). The total CSU 2007/08 final budget amounts were \$2,985,874,000 from state General Fund appropriations (not including capital outlay funding), \$1,130,641,000 from State University Fee (SUF) revenue, \$369,741,000 from other fee revenues and reimbursements for a total of \$4,486,256,000. The number of projected 2007/08 full-time equivalent students (FTES) is 356,296. 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 2007/08 average support cost per full-time equivalent student based on General Fund appropriation and State University Fee revenue only is \$11,553 and when including all sources as indicated below is \$12,567. Of this amount, the average student fee support per FTE is \$3,864, which includes all fee revenue in the CSU Operating Fund (e.g. State University Fee, nonresident tuition, application fees, and other miscellaneous fees).

2007/08	Amount	Average Cost Per FTE	
		Student	Percentage
Total Support Cost	\$4,486,256,000	\$12,591	100%
–State Appropriation	2,985,874,000	8,380	66%
–Student Fee Support*	1,130,641,000	3,173	24%
–Other Income and Reimbursements**	369,741,000	1,038	10%

\* Student fee support represents campus 2007/08 final budget submitted State University Fee revenue.

\*\* The other income and reimbursements represent campus other fee 2007/08 final budget revenues submitted, as well as reimbursements in the CSU Operating Fund. The average CSU 2007/08 academic year, resident, undergraduate student fees required to apply to, enroll in, or attend the university is \$3,521. However, the costs paid by individual students will vary depending on campus, program, and whether a student is part-time, full-time, resident, or nonresident.

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**CALIFORNIA STATE UNIVERSITY, FRESNO • S**

5241 North Maple Avenue, Fresno, CA 93740  
Dr. John D. Welty, President  
559-278-4240 • [www.csufresno.edu](http://www.csufresno.edu)

**CALIFORNIA STATE UNIVERSITY, FULLERTON • S**

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714-278-2011 • [www.fullerton.edu](http://www.fullerton.edu)

**HUMBOLDT STATE UNIVERSITY • S**

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Dr. Rollin C. Richmond, President  
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**CALIFORNIA STATE UNIVERSITY, LONG BEACH • S**

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Dr. F. King Alexander, President  
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5151 State University Drive, Los Angeles, CA 90032  
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323-343-3000 • [www.calstatela.edu](http://www.calstatela.edu)

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707-654-1000 • [www.csum.edu](http://www.csum.edu)

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**CALIFORNIA STATE UNIVERSITY, NORTHRIDGE • S**

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333 S. Twin Oaks Valley Road, San Marcos, CA 92096-0001  
Dr. Karen S. Haynes, President  
760-750-4000 • [www.csusm.edu](http://www.csusm.edu)

**SONOMA STATE UNIVERSITY • S**

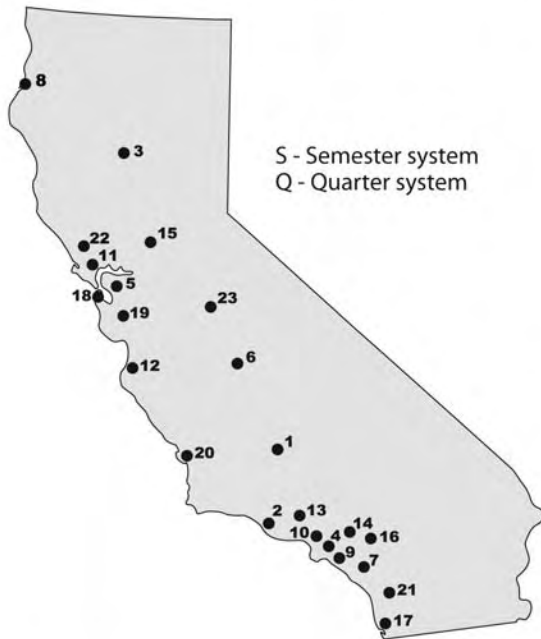
1801 East Cotati Avenue, Rohnert Park, CA 94928-3609  
Dr. Ruben Armiñana, President  
707-664-2880 • [www.sonoma.edu](http://www.sonoma.edu)

**CALIFORNIA STATE UNIVERSITY, STANISLAUS • 4-1-4**

One University Circle, Turlock, CA 95382-0299  
Dr. Hamid Shirvani, President  
209-667-3122 • [www.csustan.edu](http://www.csustan.edu)

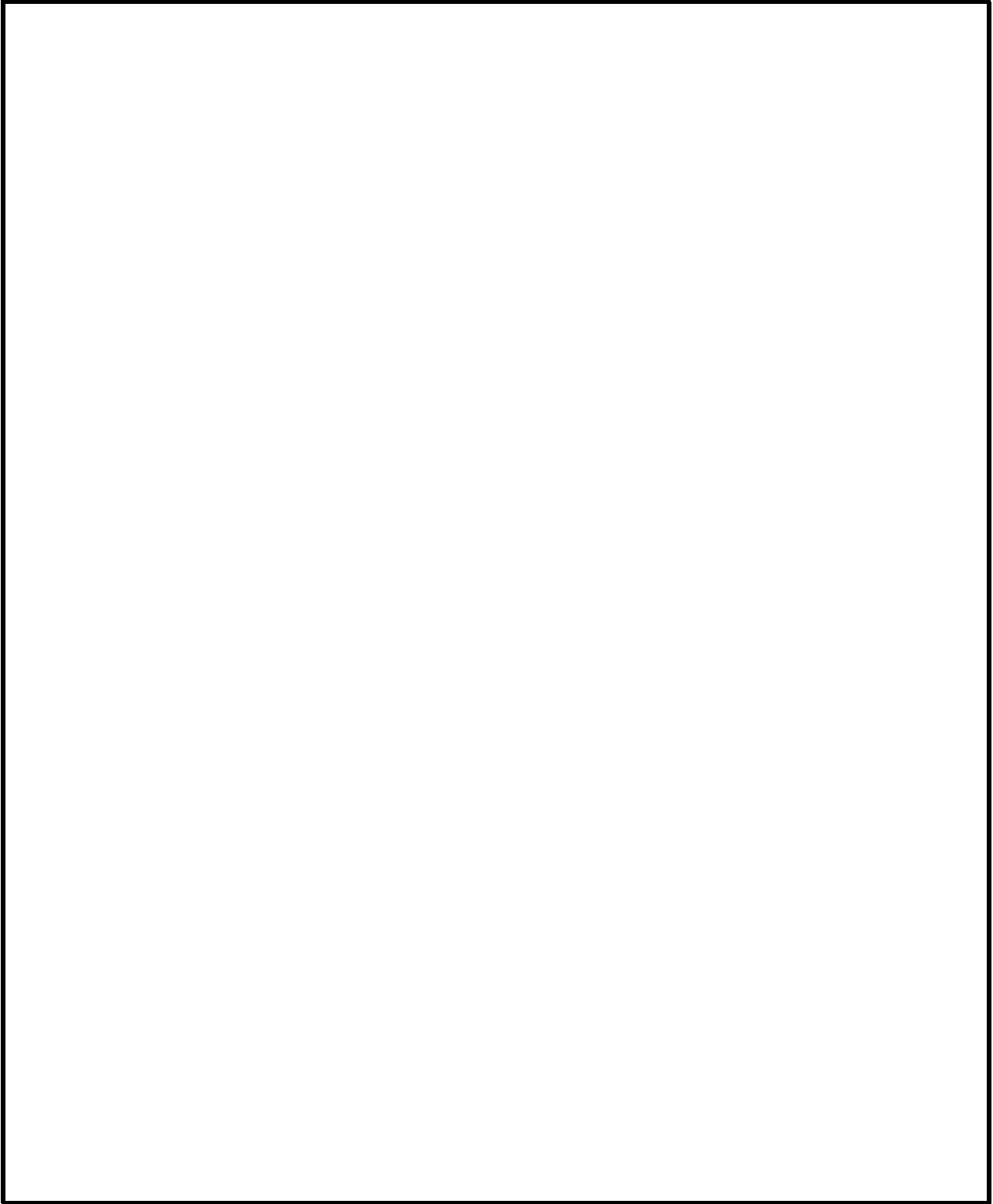
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Note: Telephone numbers are to the campus admission office.



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and  
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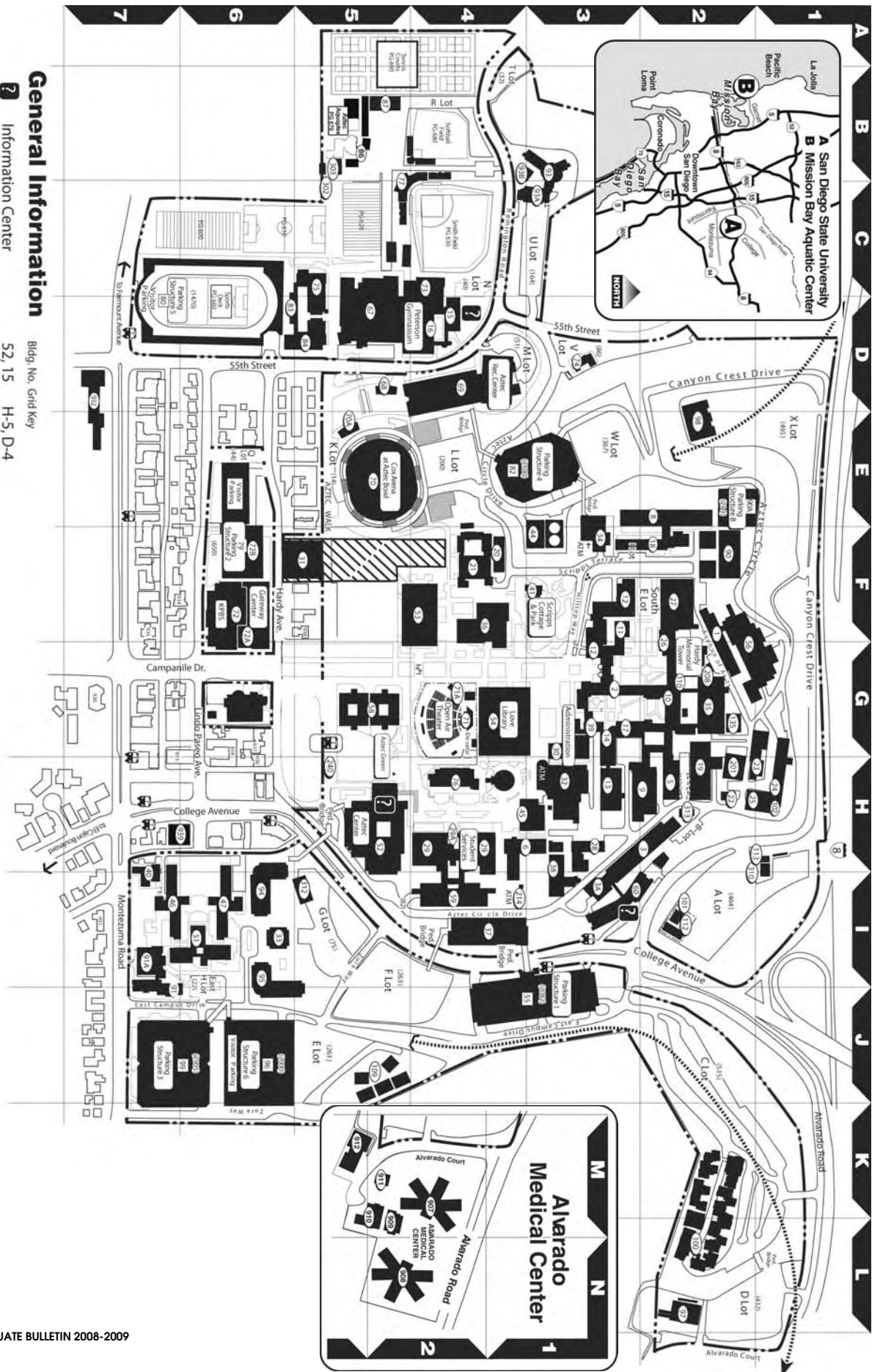
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- Information - Parking      60      I-3
- Transit Center      240    G-5
- Campus Boundary
- Trolley Line
- Construction Zone



# CAMPUS MAP INDEX — Alphabetical Listing

LOCATION NO.	LOCATION	LOCATION NO.	LOCATION	LOCATION NO.	LOCATION	LOCATION NO.	LOCATION
29	Academic Advising (University Advising Center)	72B	Center for Human Resources	39	Faculty-Staff Centre	93B	Monty's Market
58	Adams Humanities	931	Chabad House Lubavitch	302	Field Equipment Storage	53	Music
30	Administration	93	Chapultepec Residence Hall	29	Financial Aid	18	Nassir Hall
29	Advising and Evaluations	60	Chemical Sciences Laboratory	32,52	Food Courts	937	Newman Center
84	Alumni Association	44	Chill Plant	75,83,84	Football Operations Center:		
	Alvarado Medical Center:	93A	Choula Hall		Alumni Association	72A	Gateway Center:
907	Building 1 (6475 Alvarado Rd.)	25	Cogeneration Plant		American Language Institute	47	Olmeca Residence Hall
908	Building 2 (6505 Alvarado Rd.)	72A/B	College of Extended Studies (CES)		College of Extended Studies	71	Open Air Theater
909	Building 3 (6495 Alvarado Rd.)	930	College Park Presbyterian Church		Entrepreneurial Mgmt. Ctr.	71A	Open Air Theater Hospitality House
910	Building 4 (6330 Alvarado Ct.)	939	College Square (SQ)		Foundation Offices	55	Parking Structure 1
911	Building 5 (6310 Alvarado Ct.)	12	Communication		Japan Studies Institute	79	Parking Structure 2
912	Building 6 (6363 Alvarado Ct.)	37	Computer Center		Geology/Mathematics/Computer Science	99	Parking Structure 3
97	Rehabilitation Center (6361 Alvarado Court)	30	Contract & Procurement Management	3	Graduate Admissions Unit	82	Parking Structure 4
72A	American Language Institute	52	Council Travel	59	Graduate and Research Affairs	80	Parking Structure 5/Sports Deck
68	Arena Meeting Center	31	Counseling & Psychological Services		52 The Greek Store	96	Parking Structure 6
70A	Arena Ticket Office	70	Cox Arena	303	Grounds Storage	90A	Parking Structure 8
1,56	Art I/II (South/North)	70A	Cox Arena Ticket Office	26	Growth Chamber	16	Peterson Gymnasium
90	Arts and Letters		ATM	2	Hardy Tower	52	Photo ID
32,34,70A,ATM	ATM Kiosk	33	Cuicacalli (Dining)	40	Hepner Hall	17	Physical Plant
214	ATM Kiosk	36	Dramatic Arts	2	Housing Administration/Residential Education	13	Physical Sciences
67	Aztec Athletics Center	32	East Commons	9	Industrial Technology INFORMATION CENTER	14	Physics-Astronomy
52	Aztec Bowl Arena	6	Education	60	INFORMATION - PARKING	15	Police/Public Safety
70	Aztec Center	59	Education Opportunity/Ethnic Affairs	933	Institute of Religion - IJOS	86	Pool (Aquaplex)
69	Aztec Recreation Center	818	Emerald Isle	74	International Student Center	76	President's Office
45	Aztec Shops SDSU Bookstore	19	Engineering	934	Intersection House	27	Professional Studies and Fine Arts
208	Betty's Hotdogger	5	Engineering Lab	935	Jewish Campus Center	29A	Prospective Student Center
135	Bioscience Center	30	Equity and Diversity	72	KPBS Offices	26	Public Health, Graduate School of
23	Boiler Shop, Physical Plant	21	Exercise and Nutritional Sciences	10,35	Life Sciences (South/North)	73	Racquetball Courts
52	Bowling	20	Exercise and Nutritional Sciences Annex	11	Little Theatre	29	Registrar's Office
37	Education and Business Administration	72B	Extended Studies Center:	54	Love Library	97	Rehabilitation Center
30	Business and Financial Affairs		Center for Human Resources	936	Lutheran Campus Center		Residence Halls - see (West) Chapultepec
98	Business Services		College of Extended Studies	101	Maintenance Garage		Tenochca, Tepayac, Villa Alvarado, Zurra
	Reprographics		Rhetoric & Writing Studies	76	Manchester Hall	112	Resource Conservation
	Shipping/Receiving/Mail		Extended Studies - College of Facilities Planning Design & Construction	46	Maya Residence Hall	21	ROTC
31	Calpuff Center	72A/B	Facilities Planning Design & Construction	52	Montezuma Hall	29	Scholarship Office
22	CAMP Lab (Computer Aided Mechanics)						
59	Career Services						
29	Cashiers Office						

## General Information

	Information Center		Map No. Grid Key
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	Trolley Line		

## Parking Type

	Student		Handicapped
	Overnight Student		Special Permit
	Faculty / Staff		Motorcycles
	Visitor / Metered		S D Transit

## Parking Index

Lot Name	Grid Key	Parking Key	Lot Name	Grid Key	Parking Key	Lot Name	Grid Key	Parking Key
A Lot	I-2		M Lot	D-4		Parking Structure 1	J-3	
B Lot	H-2		N Lot	C-4		Parking Structure 2	F-6	
C Lot	J-2		O Lot	E-8		Parking Structure 3	J-7	
D Lot	L-2		R Lot	B-4		Parking Structure 4	E-3	
E Lot	J-5		T Lot	B-4		Parking Structure 5	D-6	
F Lot	J-5		U Lot	C-3		Parking Structure 6	J-6	
G Lot	I-5		V Lot	D-3		Parking Structure 8	E-2	
H Lot	I-6		W Lot	E-3		Student Services	I-4	
I Lot	F-3		X Lot	E-1				
K Lot	E-5							
L Lot	E-4							

# CAMPUS MAP INDEX — Numerical Listing

LOCATION NO.	LOCATION	LOCATION NO.	LOCATION	LOCATION NO.	LOCATION
1	Art I (South)	52	Aztec Center:	109	University Children's Center
2	Happier Hall	52A	Prospective Student Center	110	Growth Chamber
3	Geology/Mathematics/Computer Science	30	Administration: Business and Financial Affairs Contract & Procurement Management	112	Resource Conservation
5	Engineering Lab	31	Calpulli Center: Counseling and Psychological Services Student Disability Services Student Health Services	113	Waste Facility
6	Education	32	East Commons	135	Bioscience Center
8	Storm Hall	32	ATM	208	Betty's Hotdogger
9	Industrial Technology	33	Cuicacalli (Dining)	214	ATM kiosks
10	Life Sciences (South)	34	West Commons	240	Transit Center (bus/trolley)
11	Little Theatre	34	West End Plaza	302	Field Equipment Storage
12	Communication	34	ATM	303	Grounds Storage
13	Physics	35	Life Sciences (North)	310	Storage Shed
14	Physics-Astronomy	36	Dramatic Arts	818	Emerald Isle
15	Public Safety	36	Don Powell Theatre	907	Avarado Medical Center: Bldg. 1 (6475 Avarado Road)
16	Peterson Gymnasium	37	Administration	908	Bldg. 2 (6505 Avarado Road)
17	Physical Sciences	38	North Education	909	Bldg. 3 (6495 Avarado Road)
18	Nasatir Hall	39	Faculty-Staff Centre	910	Bldg. 4 (6330 Avarado Court)
19	Engineering	40	Housing Administration/Residential Education	911	Bldg. 5 (6310 Avarado Court)
20	Exercise and Nutritional Sciences Annex	40	Housing Administration/Residential Education	912	Bldg. 6 (6363 Avarado Court)
21	Exercise and Nutritional Sciences ROTC	41	Scrpps Cottage and Park	931	College Park Presbyterian Chabad House Libavitch
22	CAM Lab (Computer Aided Mechanics)	44	Chill Plant	932	University Towers
23	Boiler Shop, Physical Plant	44	Chill Plant	933	Institute of Religion – LDS
24	Physical Plant	45	Aztec Shops SDSU Bookstore	934	Intersection House
25	Cogeneration Plant	46	Maya Residence Hall	935	Jewish Campus Center
26	Hardy Tower	47	Omeca Residence Hall	936	Lutheran Campus Center
27	Professional Studies and Fine Arts	47	Omeca Residence Hall	937	Newman Center
28	Speech, Language, and Hearing	47	Zura Residence Hall	938	Wesley Methodist Foundation
29	Student Services (West): Academic Advising (Univ. Adv. Ctr.) Advising & Evaluations Cashiers Office Financial Aid Registrar's Office Scholarship Office Student Activities and Campus Life Student Testing, Assessment and Research	51	Zura Residence Hall	939	College Square (CSO)
		52	Aztec Center: Bowling Counsell Travel The Greek Store Food Court INFORMATION CENTER Louie's Montezuma Hall Photo ID Starbucks Coffee USE Credit Union and ATM Music	728	Extended Studies Center: Center for Human Resources College of Extended Studies Rhetoric & Writing Studies
		53	Smith Recital Hall	73	Racquetball Courts
		54	Love Library	74	International Student Center
		55	Computer Lab	74	Football Operations Center: Alumni Association
		55	Parking Structure 1	75, 83, 84	Manchester Hall: President's Office Academic Affairs
		56	Art II (North)	76	University Advancement
		58	Adams Humanities	77	Tony Gwynn Stadium
		59	Career Services	79	Parking Structure 2
			Educational Opportunity/ Ethnic Affairs Graduate Admissions Unit Graduate and Research Affairs	80	Parking Structure 5/Sports Deck
		60	Chemical Sciences Laboratory	82	Aquaplex (Pool)
		60	INFORMATION-PARKING	86	Temis/Softball Center
		67	Aztec Athletics Center	87	Arts and Letters
		68	Arena Meeting Center	90	Parking Structure 8
		69	Aztec Recreation Center	91	Tepoehca Residence Hall
		70	Cox (Aztec Bowl) Arena	91A	Tula Hall
		70A	Cox Arena Ticket Office	93A	Chapultepec Residence Hall
		71	Open Air Theater	93A	Cholla Hall
		71A	Open Air Theater Hospitality House	93B	Monty's Market
		72	KPBS Offices	94	Tepoyac Residence Hall
			KPBS TV/FM Studio	95	Taculia Residence Hall
		72A	Gateway Center: American Language Institute College of Extended Studies	95	Parking Structure 6
				96	Rehabilitation Center (6361 Avarado Ct.)
				97	Business Services: ReproGraphics Shipping/Receiving/Mail
				98	Parking Structure 3
				99	Villa Avarado Residence Hall
				100	Maintenance Garage
				101	

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## Parking Index

Lot Name	Grid Key	Parking Key	Lot Name	Grid Key	Parking Key	Lot Name	Grid Key	Parking Key
A Lot	I-2	3, 4, 5	M Lot	D-4	3, 4, 5	Parking Structure 1	J-3	3, 4, 5
B Lot	H-2	3, 4, 5	N Lot	C-4	3, 4, 5	Parking Structure 2	F-6	3, 4, 5
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I Lot	F-3	3, 4, 5	V Lot	E-3	3, 4, 5			
K Lot	E-5	3, 4, 5	W Lot	E-3	3, 4, 5			
L Lot	E-4	3, 4, 5	X Lot	E-1	3, 4, 5			



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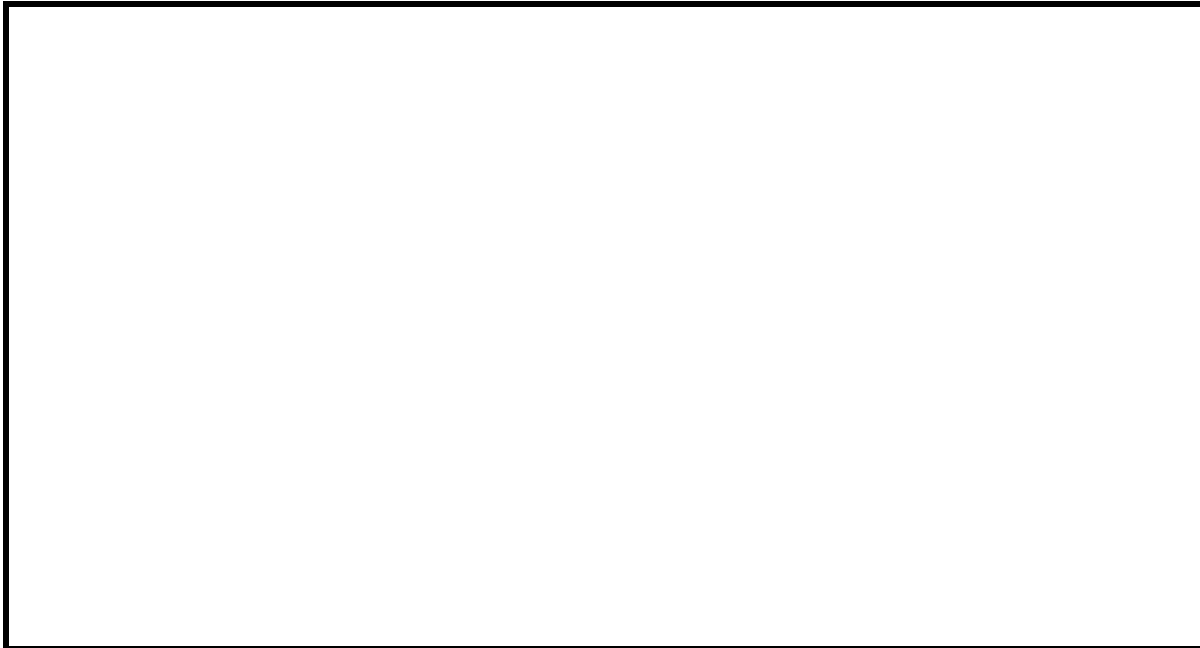
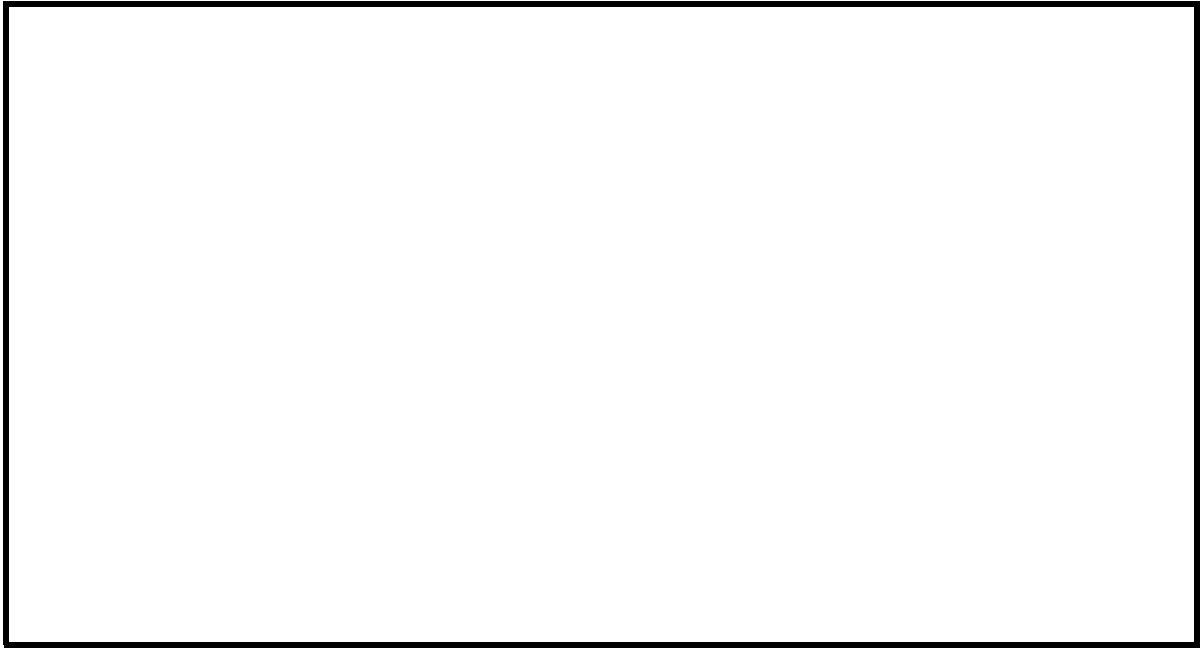
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