

# 2011-2012 Graduate Bulletin

Announcement of the  
Division of Graduate Affairs



*Provost Nancy Marlin*

## Welcome to SDSU

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, internships, study abroad 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 remarkable students, exceptional faculty and innovative programs. 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 vibrant university whose graduates are well prepared to serve our region, our state, our nation, and our world.

5500 Campanile Drive  
San Diego, CA 92182  
619-594-5200

Homepage:  
[www.sdsu.edu](http://www.sdsu.edu)

Catalog Web site:  
[www.sdsu.edu/graduatebulletin](http://www.sdsu.edu/graduatebulletin)

# Academic Excellence

## 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.

## 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 76, one educational specialist degree (Ed.S.), research doctorates (Ph.D./Ed.D.) in 19 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 award-winning professors, top-notch research facilities, and a location at 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 make a difference not only in the San Diego region, but also around the world. What difference will you make? Start imagining now.

*San Diego State University is dedicated to preparing students for success in today's rapidly changing world. Our students, faculty, staff and alumni strive for excellence in all they do: as scholars, as community members, and as participants in the quest for human advancement.*



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



## San Diego: An International Hub

On the Pacific Rim and bordering 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, we welcome thousands of international students who provide enriching cultural interaction for the campus community. Our study abroad program is unparalleled in the opportunities offered to SDSU students. 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 our international programs gain intercultural communication skills, global understanding, a broader view of the world, lifelong friendships, foreign language skills, and a better awareness of self. SDSU is ranked second in the nation in its class for the number of students who have an international experience. Join more than 1,600 students studying abroad each year in approximately 50 countries, including Australia, Spain, Japan, Mexico, and China.

**Globally-focused Programs**—Campus-based academic programs and centers with a global focus include the Center for International Business Education and Research, the Center for Latin American Studies, the International Security and Conflict Resolution degree program and the International Business major, which is one of the largest of its kind in the nation.

# What Makes SDSU a Great University?



*For three consecutive years, SDSU has been ranked the No. 1 most productive research university, among schools with 14 or fewer Ph.D. programs based on the Faculty Scholarly Productivity Index.*

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 182 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 \$1.1 billion in external funding, bringing both cutting-edge equipment and the excitement of discovery into laboratories and classrooms.

Active at the international level, SDSU ranks second among universities of its type for the number of students studying abroad. International opportunities—including pioneering triple-degree programs offered in conjunction with universities in Canada and Mexico or Mexico and Chile—give students a competitive advantage as they move into professional careers or pursue graduate studies.

## Campus Growth

The San Diego State campus, with its distinctive California mission style of architecture, has supported more than \$700 million in new construction during 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. The San Diego Trolley station at SDSU provides 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 30,000 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 covering 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 age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status.

The policy stands as a statement of this university's moral commitment to the right of all persons to equal opportunity in a nondiscriminating, harassment-free atmosphere. The Office of 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. Refer to San Diego State University Senate personnel guidelines, Part III-A-3, pertaining to nondiscrimination as well as California State University Executive Orders 340, 345, and 675.

# Annual Calendar

CALENDAR 2011																				
JANUARY					FEBRUARY					MARCH										
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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2	3	4	5	6	7	8	6	7	8	9	10	11	12	6	7	8	9	10	11	12
9	10	11	12	13	14	15	13	14	15	16	17	18	19	13	14	15	16	17	18	19
16	17	18	19	20	21	22	20	21	22	23	24	25	26	20	21	22	23	24	25	26
23	24	25	26	27	28	29	27	28						27	28	29	30	31		
30	31																			
APRIL					MAY					JUNE										
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3	4	5	6	7	8	9	8	9	10	11	12	13	14	5	6	7	8	9	10	11
10	11	12	13	14	15	16	15	16	17	18	19	20	21	12	13	14	15	16	17	18
17	18	19	20	21	22	23	22	23	24	25	26	27	28	19	20	21	22	23	24	25
24	25	26	27	28	29	30	29	30	31					26	27	28	29	30		
JULY					AUGUST					SEPTEMBER										
					1	2	1	2	3	4	5	6	1	2	3					
3	4	5	6	7	8	9	7	8	9	10	11	12	13	4	5	6	7	8	9	10
10	11	12	13	14	15	16	14	15	16	17	18	19	20	11	12	13	14	15	16	17
17	18	19	20	21	22	23	21	22	23	24	25	26	27	18	19	20	21	22	23	24
24	25	26	27	28	29	30	28	29	30	31				25	26	27	28	29	30	
31																				
OCTOBER					NOVEMBER					DECEMBER										
					1		1	2	3	4	5			1	2	3				
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9	10	11	12	13	14	15	13	14	15	16	17	18	19	11	12	13	14	15	16	17
16	17	18	19	20	21	22	20	21	22	23	24	25	26	18	19	20	21	22	23	24
23	24	25	26	27	28	29	27	28	29	30				15	16	17	18	19	20	21
30	31													22	23	24	25	26	27	28

CALENDAR 2012																				
JANUARY					FEBRUARY					MARCH										
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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8	9	10	11	12	13	14	5	6	7	8	9	10	11	4	5	6	7	8	9	10
15	16	17	18	19	20	21	12	13	14	15	16	17	18	11	12	13	14	15	16	17
22	23	24	25	26	27	28	19	20	21	22	23	24	25	18	19	20	21	22	23	24
29	30	31					26	27	28	29				25	26	27	28	29	30	31
APRIL					MAY					JUNE										
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8	9	10	11	12	13	14	6	7	8	9	10	11	12	3	4	5	6	7	8	9
15	16	17	18	19	20	21	13	14	15	16	17	18	19	10	11	12	13	14	15	16
22	23	24	25	26	27	28	20	21	22	23	24	25	26	17	18	19	20	21	22	23
29	30						27	28	29	30	31			24	25	26	27	28	29	30
JULY					AUGUST					SEPTEMBER										
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8	9	10	11	12	13	14	5	6	7	8	9	10	11	2	3	4	5	6	7	8
15	16	17	18	19	20	21	12	13	14	15	16	17	18	9	10	11	12	13	14	15
22	23	24	25	26	27	28	19	20	21	22	23	24	25	16	17	18	19	20	21	22
29	30						26	27	28	29	30	31		23	24	25	26	27	28	29
														30						
OCTOBER					NOVEMBER					DECEMBER										
1	2	3	4	5	6	7	1	2	3				1							
8	9	10	11	12	13	14	4	5	6	7	8	9	10	2	3	4	5	6	7	8
15	16	17	18	19	20	21	11	12	13	14	15	16	17	9	10	11	12	13	14	15
22	23	24	25	26	27	28	18	19	20	21	22	23	24	16	17	18	19	20	21	22
29	30	31					25	26	27	28	29	30		23	24	25	26	27	28	29
														30	31					

# Academic Calendar

# 2011-2012

## SUMMER TERM 2011

May 25	First day of summer term.
May 25-July 8	Session S1 term.
May 25-August 19	Session T1 term.
May 25	First day of S1 and T1 classes.
May 30	Holiday – Memorial Day. Faculty/staff holiday. Campus closed.
June 1	Last day to drop S1 classes.
June 3	Last day to add S1 classes.
June 3	Last day to drop T1 classes.
June 7	Last day to add T1 classes.
June 7	Last day to apply for August 2011 graduation with an advanced degree, Division of Graduate Affairs.
June 30	Final day for submitting theses to Aztec Shops Montezuma Publishing for thesis review to ensure graduation in August 2011.
July 1	Applications for an advanced degree for May and August 2012 graduation accepted.
July 1	Theses may be submitted on an at-risk basis. However, August 2011 graduation is contingent upon completion of final processing by noon, August 17. Students missing this deadline will be required to reapply for graduation for the term in which they expect to graduate.
July 4	Holiday – Independence Day. Faculty/staff holiday. Campus closed.
July 8	Last day of S1 classes.
July 11-August 19	Session S2 term.
July 11	First day of S2 classes.
July 15	Last day to drop S2 classes.
July 19	Last day to add S2 classes.
July 20	Census.
July 29	Last day for submission of Incomplete and RP grade removals (excluding thesis) for August 2011 graduation with an advanced degree.
August 12	Last day for reporting results on comprehensive examinations to the Division of Graduate Affairs by department or college.
August 17	Final day for depositing approved theses at Aztec Shops Montezuma Publishing. (Noon deadline.)
August 17	Last day of T1 and S2 classes. (Final examinations are the last day of classes for each summer session.)
August 19	Grades due from instructors. (11 p.m. deadline.)
August 19	Last day of summer term.
August 19	Last day for submitting theses for the current term.

## FALL SEMESTER 2011

August 1	Applications for admission or readmission to San Diego State University for the spring semester 2011 accepted from domestic and international (foreign) students.*
August 22	First day of fall semester.
August 25	Convocation.
August 26	Last day to officially withdraw for fall semester 2011 and receive a full refund.
August 29	First day of classes.

September 5	Holiday – Labor Day. Faculty/staff holiday. Campus closed.
September 12	Last day to drop classes.
September 14	Last day to add classes or change grading basis.
September 14	Last day for payment of fees for late registration. (3:30 p.m. deadline.)
September 14	Last day to officially withdraw from the university without penalty fee for fall semester 2011.
September 14	Last day to file petition for concurrent master's degree credit for fall semester 2011.
September 14	Last day to apply for fall 2011 graduation with an advanced degree, Division of Graduate Affairs.
September 26	Census.
October 1	Applications for admission or readmission to San Diego State University for the fall semester 2012 accepted from domestic and international (foreign) students.*
October 28-29	Family Weekend.
November 1	Final day for submitting theses to Aztec Shops Montezuma Publishing for thesis review to ensure graduation in December 2011.
Nov. 2-Dec. 30	Theses may be submitted to Aztec Shops Montezuma Publishing on an at-risk basis. However, December 2011 graduation is contingent upon completion of final processing by noon, December 17.
November 2	Last day to officially withdraw from all classes for fall 2011 and receive a prorated refund (withdrawal after September 14 requires special approval and a penalty fee is assessed).
November 11	Holiday – Veteran's Day. Faculty/staff holiday. Campus closed.
November 24-25	Holiday – Thanksgiving recess. Faculty/staff holiday. Campus closed.
November 30	Last day for submission of incomplete and RP grade removals (excluding thesis) for December 2011 graduation with an advanced degree.
December 9	Last day of classes before final examinations.
December 9	Last day for reporting results on comprehensive examinations to the Division of Graduate Affairs by department or college.
December 10-17	Final examinations.
December 16	Final day for depositing approved theses at Aztec Shops Montezuma Publishing. (Noon deadline.)
December 26-29	Holiday – Winter recess. Faculty/staff holiday. Campus closed.
December 30	Campus open. No classes.
December 30	Grades due from instructors. (11 p.m. deadline.)
December 30	Last day to apply for a leave of absence for fall semester 2011.
December 30	Last day for submitting theses for the current term.
December 30	Last day of fall semester.
January 2	Holiday – New Year's Day observed. Faculty/staff holiday. Campus closed.

\* Graduate applicants should consult the departmental listings in this bulletin.

## Academic Calendar

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### SPRING SEMESTER 2012

January 16	Holiday – Martin Luther King, Jr. Day. Faculty/staff holiday. Campus closed.	April 27	Last day for submission of Incomplete and RP grade removals (excluding thesis) for May 2012 graduation with an advanced degree.
January 17	First day of spring semester.	May 9	Last day of classes before final examinations.
January 17	Last day to officially withdraw for spring semester 2012 and receive a full refund.	May 9	Last day for reporting results on comprehensive examinations to the Division of Graduate Affairs by department or college.
January 18	First day of classes.	May 10-17	Final examinations (beginning at 4 p.m. on May 10).
January 31	Last day to drop classes.	May 17	Commencement, Imperial Valley Campus.
February 1	Applications for an Advanced Degree for December 2012 graduation accepted.	May 19	Final day for depositing approved theses at Aztec Shops Montezuma Publishing. (Noon deadline.)
February 2	Last day to add classes or change grading basis.	May 18-20	Commencement days, main campus.
February 2	Last day for payment of fees for late registration. (3:30 p.m. deadline.)	May 22	Grades due from instructors. (11 p.m. deadline.)
February 2	Last day to officially withdraw from the university for spring semester 2012.	May 22	Last day to apply for a leave of absence for spring semester 2012.
February 2	Last day to file application for an Advanced Degree for May and August 2012 graduation.	May 22	Last day for submitting theses to Aztec Shops Montezuma Publishing for the current term. (Noon deadline.)
February 2	Last day to file petition for concurrent master's degree credit for spring semester 2012.	May 22	Last day of spring semester.
February 2	Last day to file application for bachelor's degree for May and August 2012 graduation		
February 14	Census.		
March 26-30	Spring recess.		
March 30	Holiday – Cesar Chavez Day. Faculty/staff holiday. Campus closed.		
April 4	Last day to officially withdraw from all classes for spring 2012 and receive a prorated refund (withdrawal after February 2 requires special approval and a penalty fee is assessed).		
April 4	Final day for submitting theses to Aztec Shops Montezuma Publishing for thesis review to ensure graduation in May 2012.  Joint university deadlines apply when submitting approved doctoral dissertations to the Division of Graduate Affairs for May commencement.		
April 5-May 24	Theses may be submitted to the Division of Graduate Affairs after this date on an at-risk basis. However, May 2012 graduation is contingent upon completion of final processing by noon, May 20. Students missing this deadline will be required to reapply for graduation for the term in which they expect to graduate.		

### SUMMER TERM 2012

NOTE:	Summer session dates to be determined. Refer to SDSU Summer Session <i>Class Schedule</i> .
May 28	Holiday – Memorial Day. Faculty/staff holiday. Campus closed.
June 29	Final day for submitting theses to Aztec Shops Montezuma Publishing for thesis review to ensure graduation in August 2012.
July 4	Holiday – Independence Day. Faculty/staff holiday. Campus closed.

*Please Note: This is not an employee work calendar and is subject to change. Refer to the SDSU Web site for changes to this calendar.*



# PART ONE

## Administration and Organization

# Administration and Organization

## Principal Officers of Administration

President of the University . . . . . Elliot Hirshman  
 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 . . . . . Edith J. Benkov  
 Assistant Vice President for  
 International Programs . . . . . Alan R. Sweedler

### ACADEMIC DEANS

College of Arts and Letters . . . . . Paul Wong  
 College of Business Administration . . . . . Michael R. Cunningham  
 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 . . . . . Gale S. Etschmaier  
 College of Extended Studies . . . . . Joseph B. Shapiro  
 Division of Undergraduate Studies . . . . . Geoffrey W. Chase  
 Imperial Valley Campus . . . . . David E. Pearson

### GRADUATE AND RESEARCH AFFAIRS

Vice President for Research and Graduate Dean . . . Stephen C. Welter  
 Associate Dean for Division of Graduate Affairs . . . . . Radmila Prislin  
 Director for Division of Research Affairs . . . . . Dena Plemmons (Interim)

## THE GRADUATE COUNCIL

The Graduate Council of San Diego State University consists of 22 members to include 15 full-time faculty, two from each college and one from the Imperial Valley Campus; Dean of the Graduate Division or designee, who will chair the committee; Provost, Associate and Assistant Deans of the Graduate Division, Dean of the Library and Information Access or designee, and two classified graduate students in good standing.

Stephen C. Welter . . . . . Vice President for Research and  
 Graduate Dean  
 Nancy A. Marlin . . . . . Provost  
 Radmila Prislin . . . . . Associate Dean for Division of Graduate Affairs  
 Edward Aguado . . . . . Assistant Dean for Division of Graduate Affairs  
 C. Anne Turhollow . . . . . Associate Dean of the Library  
 and Information Access (Interim)  
 Lawrence Baron . . . . . College of Arts and Letters  
 Ramona L. Perez . . . . . College of Arts and Letters  
 Andrew Q. Do . . . . . College of Business Administration  
 David P. Ely . . . . . College of Business Administration  
 Sharan A. Gibson . . . . . College of Education  
 Caren L. Sax . . . . . College of Education  
 Eugene A. Olevsky . . . . . College of Engineering  
 Satchi Venkataraman . . . . . College of Engineering  
 Steven J. Kramer . . . . . College of Health and Human Services  
 Larry S. Verity . . . . . College of Health and Human Services  
 Dana M. Nurge . . . . . College of Professional Studies  
 and Fine Arts  
 Kevin M. Delgado . . . . . College of Professional Studies  
 and Fine Arts  
 Leland L. Beck . . . . . College of Sciences  
 José E. Castillo . . . . . College of Sciences  
 Eugene A. Olevsky . . . . . College of Engineering  
 (Vacant) . . . . . Imperial Valley Campus  
 Sheila Deam . . . . . Associated Students  
 Nicole Simons . . . . . Associated Students

**UNIVERSITY RESEARCH COUNCIL**

The University Research Council of San Diego State University 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. Much of the work of the council is carried out in its standing committees that include:

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

The University Research Council membership is composed of no fewer than 15 faculty representing the various colleges and is chaired by the vice president for research.

- Stephen C. Welter . . . . . Vice President for Research and Graduate Dean
- Bob E. Wolfson . . . . . Executive Director, SDSU Research Foundation
- Dena Plemmons (*ex officio*) . . . . . Director for Division of Research Affairs (Interim)
- Radmila Prislin (*ex officio*) . . . . . Associate Dean for Division of Graduate Affairs
- Wayne A. Beach . . . . . School of Communication
- Sanford I. Bernstein . . . . . Department of Biology
- Marilee J. Bresciani . . . . . Department of Administration, Rehabilitation and Postsecondary Education

- Fatih Buyuksonmez . . . . . Department of Civil, Construction, and Environmental Engineering
- John D. Clapp . . . . . School of Social Work
- Elizabeth D. Cordero . . . . . Imperial Valley Campus
- Christopher J. Frost . . . . . Division of Undergraduate Studies
- Sharan A. Gibson . . . . . School of Teacher Education
- Christopher C. Glembotski . . . . . Department of Biology
- Douglas B. Grotjahn . . . . . Department of Chemistry and Biochemistry
- Greg L. Harris . . . . . Department of Biology
- Keven Jeffery . . . . . Library and Information Access
- Samuel K. Kassegne . . . . . Department of Mechanical Engineering
- Susan S. Levy . . . . . School of Exercise and Nutritional Sciences
- Tracy E. Love-Geffen . . . . . School of Speech, Language, and Hearing Sciences
- Jeanne F. Nichols . . . . . School of Exercise and Nutritional Sciences
- Robert Plice . . . . . Department of Management Information Systems
- Jessica Rentto . . . . . Business and Financial Affairs
- Scott C. Roesch . . . . . Department of Psychology
- Gregory A. Talavera . . . . . Graduate School of Public Health
- Emilio C. Ulloa . . . . . Department of Psychology
- John R. Weeks . . . . . Department of Geography



# PART TWO

Admission and Registration  
Fees

Financial Aid and Scholarships

Student Services

Special Programs

# Admission and Registration

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 number 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

The schedule adjustment period allows you to drop a course, add a course, withdraw from the university, and change the grading basis of a course. The deadline to DROP a class is at 11:59 p.m. on the 10th day of the term. The deadline to ADD a class, change grading basis or withdraw from the university is at 11:59 p.m. on the 12th day of the term. You are not allowed to make any schedule adjustments after these deadlines and are responsible for knowing the current semester dates for these deadlines, which can be found on the academic calendar and the *Class Schedule* registration notice.

## CSU Immunization Requirements

Entering CSU students are required to present proof of the following immunizations to the CSU campus they will be attending before the beginning of their first term of enrollment.

**Measles and Rubella.** All new and readmitted students must provide proof of full immunization against measles and rubella prior to enrollment.

**Hepatitis B.** All new students who will be 18 years of age or younger at the start of their first term at a CSU campus must provide proof of full immunization against Hepatitis B before enrolling. Full immunization against Hepatitis B consists of three timed doses of vaccine over a minimum 4 to 6 months period. If you need further details or have special circumstances, please consult Student Health Services at 619-594-5281 or visit <http://shs.sdsu.edu>. 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 contracting the disease and indicating whether or not the student has chosen to receive the vaccination. These are not admission requirements, but are required of students as conditions of enrollment in CSU.

## 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. All applicants, including those who graduated from San Diego State University are also required to complete and submit an application and the \$55 nonrefundable application fee. Applicants for post-baccalaureate programs are limited to the choice of a single CSU campus on each application. 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 campus. 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

Admission to San Diego State University for graduate study is a competitive process and open to those applicants who the university judges to be fully qualified to benefit from graduate study. The requirements listed below are the minimum required for admission to the university. Many programs have established additional requirements. Potential applicants should refer to the *Graduate Bulletin* under the departmental listings. Students in their final baccalaureate year who are contemplating graduate study are also advised to contact the departmental offices as soon as possible for information and advice. Some departments stop reviewing applications earlier than others because space is limited.

## General Admission Requirements

Applicants for any type of graduate study at San Diego State University must: (a) hold an acceptable baccalaureate degree earned at an institution accredited by a regional accrediting association, or the

applicant has completed equivalent academic preparation as determined by the graduate dean; (b) have attained a grade point average of at least 2.85 in an acceptable earned baccalaureate degree, or at least 2.85 in the last 60 semester (90 quarter) units attempted, or hold an acceptable post-baccalaureate degree earned at an institution accredited by a regional accrediting association; (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. All sections (Verbal, Quantitative, Analytical Writing) must be completed. 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 Management and Policy 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, English language, and IELTS scores should be sent electronically to San Diego State University (Institutional Code 4682 for GRE and English language, 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.

## Graduate and Post-Baccalaureate English Language Requirement

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). Several CSU campuses may use alternative methods for assessing fluency in English including Pearson Test of English Academic (PTE Academic), the International English Language Testing System (IELTS), and the International Test of English Proficiency (ITEP).

## Admission Categories

Graduate and post-baccalaureate applicants may apply for a degree objective, a credential or certificate objective, or where approved, may have no program objective. Depending on the objective, the CSU will consider an application for admission as follows:

- General Requirements. The minimum requirements for admission to graduate and post-baccalaureate studies at a California State University campus are in accordance with university regulations as well as Title 5, Chapter 1, Subchapter 3 of the California Code of Regulations.

## Admission and Registration

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- Specifically, a student shall at the time of enrollment: (1) have completed a four-year college course of study and hold an acceptable baccalaureate degree from an institution accredited by a regional accrediting association, or shall have completed equivalent academic preparation as determined by appropriate campus authorities; (2) be in good academic standing at the last college or university attended; (3) have earned a grade point average of at least 2.5 on the last degree completed by the candidate or have attained a grade point average of at least 2.5 (A=4.0) in the last 60 semester (90 quarter) units attempted; and (4) satisfactorily meet the professional, personal, scholastic, and other standards for graduate study, including qualifying examinations, as appropriate campus authorities may prescribe. In unusual circumstances, a campus may make exceptions to these criteria.
- Students who meet the minimum requirements for graduate and post-baccalaureate studies may be considered for admission in one of the four following categories:
- **Graduate Classified.** To pursue a graduate degree, applicants are required to fulfill all of the professional, personal, scholastic, and other standards, including qualifying examinations, prescribed by the campus; or
- **Graduate Conditionally Classified.** Applicants may be admitted to a graduate degree program in this category if, in the opinion of appropriate campus authority, deficiencies may be remedied by additional preparation; or
- **Post-Baccalaureate Classified** (e.g. admission to an education credential program). Persons wishing to enroll in a credential or certificate program, will be required to satisfy additional professional, personal, scholastic, and other standards, including qualifying examinations, prescribed by the campus; or
- **Post-Baccalaureate Unclassified.** To enroll in undergraduate courses as preparation for advanced degree programs or to enroll in graduate courses for professional or personal growth, applicants must be admitted as post-baccalaureate unclassified students. By meeting the general requirements, applicants are eligible for admission as post-baccalaureate unclassified students. Admission in this status does not constitute admission to, or assurance of consideration for admission to, any graduate degree or credential program (Most CSU campuses do not offer admission to unclassified post-baccalaureate students).

### 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 on 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 should 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. 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 tuition on an in-state or out-of-state basis. 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 (CSU) 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 CSU's Web site at [www.calstate.edu/GC/resources.shtml](http://www.calstate.edu/GC/resources.shtml).

The Office of Admissions is responsible for determining the residence status of all new and returning students based on the Application for Admission and the Residency Questionnaire. The Office of the Registrar determines residence status for currently enrolled students using the 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 may 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.

Nonresident students seeking reclassification are required to complete a supplemental questionnaire that includes questions concerning their financial dependence on parents or others who do not meet university requirements for classification as residents for tuition purposes. Financial independence is required, along with physical presence and intent, to be eligible for reclassification.

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.

Residence determination dates are set each term.

**Semester Term Campuses**

Fall	September 20
Spring	January 25
Summer	June 1

CalState TEACH operates on a trimester system. The residence determination dates for CalState TEACH are as follows:

Fall	September 20
Spring	January 5
Summer	June 1

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 information 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 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, a detailed evaluation report and a copy of certificates, and detailed transcripts of record from each college or university attended. All documents, transcripts, and test scores must be received by Graduate Admissions no later than the file completion deadline indicated in the applicant's WebPortal account. 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 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 Five 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. 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 schedule adjustment period each semester. Students wishing to register late must pay registration fees plus a \$25.00 late fee before 4 p.m. on the 12th class day of the semester. After receiving an add code from the instructor of the course the student wants to add, the student must access the SDSU WebPortal to officially register. The last day to add classes is 11:59 p.m. on the 12th 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.

# Fees

The CSU makes every effort to keep student costs to a minimum. Fees listed in published schedules or student accounts may need to be increased when public funding is inadequate. Therefore, CSU must reserve the right, even after initial fee payments are made, to increase or modify any listed fee, without notice, until the date when instruction for a particular semester or quarter has begun. All CSU listed fees should be regarded as estimates that are subject to change upon approval by The Board of Trustees.

For updated information regarding the fee structure for 2011-2012 refer to the online *Class Schedule* or Student Account Services Web site at <http://www.sdsu.edu/sas>.

Tuition and fees must be paid prior to accessing the WebPortal 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 tuition and fees 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 tuition and fees should be made online or 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 Account Services Web site at <http://www.sdsu.edu/sas> and see Online Services.

In cooperation with SDSU, CASHNet™SmartPay allows students to pay their tuition and fees and/or out-of-state tuition with MasterCard, Discover Card, or American Express card. CASHNet™SmartPay is accessed directly from your online student account. Visit the Student Account Services Web site at <http://www.sdsu.edu/sas> and see Online Services.

Payments made via CASHNet™SmartPay are received by Student Account Services 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.

Depending on the situation, you may be required to clear your hold with cash, money order, or certified check.

## BASIC TUITION FEES – ALL STUDENTS

(On basis of units carried.)

The following reflects applicable systemwide fees. Fee payment information and instructions are in the *Class Schedule* available at <http://www.sdsu.edu/schedule>.

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.

### BASIC TUITION AND FEES

#### FALL 2011/SPRING 2012, Per Semester

Units Attempted	Basic Tuition and Fees
<b>Undergraduate</b>	
0 units – 6.0 units .....	\$2,140.00
6.1 or more units .....	\$3,289.00
<b>Graduate</b>	
0 units – 6.0 units .....	\$2,506.00
6.1 or more units .....	\$3,922.00

Units Attempted	Basic Tuition and Fees
<b>Teaching Credential Candidates</b>	
0 units – 6.0 units .....	\$2,395.00
6.1 or more units .....	\$3,727.00
<b>Doctoral Students *</b>	
0 units – 6.0 units .....	\$5,803.00
6.1 or more units .....	\$5,803.00

\* Does not include joint doctoral students.

Tuition and fees above include a Student Body Association Fee of \$35.00, a Student Union Fee of \$143.00, a Health Facilities Fee of \$25.00, an Instructionally Related Activities Fee of \$175.00, a Health Services Fee of \$150.00, a Library Use Fee of \$25.00, and a Basic Tuition Fee of either \$1,416.00 or \$2,442.00 for undergraduate students, \$1,746.00 or \$3,009.00 for graduate students, \$1,644.00 or \$2,835.00 for teaching credential candidates, or \$5,250.00 for doctoral students, depending on unit load.

Imperial Valley Campus students pay a Student Body Association Fee of \$65.00, a Student Union Fee of \$24.00, a Health Facilities Fee of \$3.00, a Health Services Fee of \$10.00, and an Instructionally Related Activities Fee of \$15.00. 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.

## PROFESSIONAL PROGRAM FEE

Effective January 2011, graduate students in the College of Business must pay an additional \$254.00 per unit for all units taken as a requirement for graduation for the following degrees. This fee is in addition to basic tuition and fees and nonresident tuition.

- MBA Master of Business Administration
- MS Accountancy
- MS Business Administration

A fee waiver is available for courses that are not used to meet degree requirements (excluding prerequisite courses). Contact the Graduate Business Programs Office, Student Services East, Room 3428, for details.

## TUITION FOR NONRESIDENT STUDENTS

### (Foreign and Out-of-State)

Nonresident tuition is paid in addition to basic tuition and fees and other systemwide fees charged to all students. Tuition will be charged for all units attempted. The total nonresident tuition paid per term will be determined by the number of units taken.

Per unit .....

\$372.00  
(Mandatory systemwide fees are waived for those individuals who qualify for such exemption under the provisions of the *California Education Code*. 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

## Fees

### 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 2011-2012 Academic Year

	Living off Campus	Living on Campus	Commuting from Home
Basic tuition and fees.....	\$6,578	\$6,578	\$6,578
Books and supplies .....	1,661	1,661	1,661
Food and housing .....	10,533	11,549	3,863
Transportation .....	1,714	1,338	1,379
Miscellaneous/Personal .....	2,810	2,694	2,897
Total.....	\$23,296	\$23,820	\$16,378

The academic year basic tuition and fees for teacher credential students are \$7,454. Basic tuition and fees are \$7,844 for post-baccalaureate students, and \$11,606 for education doctoral (Ed.D.) students. Graduate business students in selected degree programs pay an additional \$254 per unit (refer to the Professional Program Fee information). Nonresident tuition is an additional \$372 per unit.

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

The California State University (CSU) makes every effort to keep student costs to a minimum. Fees listed in published schedules or student accounts may need to be increased when public funding is inadequate. Therefore, CSU must reserve the right, even after initial fee payments are made, to increase or modify any listed fees, without notice, until the date when instruction for a particular semester has begun. All CSU listed fees should be regarded as estimates that are subject to change upon approval by the Board of Trustees.

### 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 (per page) .....	1.00
Enrollment confirmation deposit fee (nonrefundable).....	400.00
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) .....	7.00
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
Basic tuition and fees installment plan service charge .....	60.00

\*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/sas> under Financial Information Student Fees. The courses are also footnoted in the *Class Schedule*.

### INSTALLMENT PLAN

**Basic Tuition and Fees.** An installment plan is available for students who wish to pay their basic tuition and fees in payments. There is a \$60.00 service charge for this service, paid at the time the initial payment is made. Additional information and instructions are available in the Money Matters section of the *Class Schedule* or may be obtained from Student Account Services.

**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. Additional information and instructions are available in the Money Matters section of the *Class Schedule*.

### CREDIT CARDS

Student Account Services/Cashiers does not accept credit cards for payment of tuition and fees except as applicable under the terms of the Installment Plan. Visa and Master Charge bank credit cards may be used for payment of student fees. 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, CASHNet™SmartPay does afford students the choice to use a credit card (American Express, MasterCard, Discover Card and Diners Club Card) to pay tuition and fees. Refer to fees section on previous page. Most ATM cards are also accepted for payment of miscellaneous charges. Additional information is available from Student Account Services.

**LIABILITY FOR PAYMENT**

Whether or not an invoice is received from the university, students are liable for payment of all tuition and fees related to **units held on or added after the close of business on the 12th 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 12th day** following the commencement of instruction.

All continuing students participating in online registration must make tuition and fee payments by the deadline as instructed.

Nonresident (foreign and out-of-state) tuition must be paid prior to the first day of classes. Nonresident and foreign students must pay or sign up for the Tuition Installment Plan 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 TUITION AND FEES DUE.** Additional fees that may become due as a result of units added during the semester must be paid at Student Account Services/Cashiers at the time the units are added. Note fee schedule above. LATE PAYMENTS FOR TUITION AND FEES ARE SUBJECT TO AN ADDITIONAL LATE FEE AND APPLICABLE SERVICE CHARGES.

**DISHONORED CHECK**

If your check (either paper or electronic) 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 tuition or fees 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 MANDATORY 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 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, special session, and extended education programs or courses at the California State University are governed by a separate policy established by the university, available at <http://www.sdsu.edu/sas>.

In order to receive a full refund of mandatory fees, 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 at <http://www.sdsu.edu/registrar>.

For state-supported semesters, quarters, and non-standard terms or courses of four (4) 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 percent point in the term will be entitled to a refund of any mandatory fees or nonresident tuition.

For state-supported non-standard terms or courses of less than four (4) weeks, no refunds of mandatory fees and nonresident tuition will be made unless a student cancels registration or drops all classes prior to the first day in accordance with the university's established procedures and deadlines.

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

- The fees were assessed or collected in error;
- The course for which the 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 Student Account Services. 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:

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

Examples of refund calculations are available upon request at Student Account Services.

**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:

<i>Period</i>	<i>Amount of Refund</i>
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 must be turned in to Student Account Services at the time you file your refund application. Refund applications are available at Student Account Services. 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. 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 – STUDENT ACCOUNT SERVICES

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 Student Account Services. Petitions must be filed with Student Account Services **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 Student Account Services/Cashiers.

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 Veterans Center located in Education, Room 151.

### FEE WAIVERS

The *California Education Code* includes provisions for the waiver of mandatory systemwide fees as follows:

**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;

**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); and

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

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

### OVER 60 FEE WAIVER PROGRAM

San Diego State University offers a fee waiver program for California residents 60 years of age and older. Both undergraduate and postbaccalaureate students may participate in the program. The program waives the \$55 admission application fee and regular registration fees (except for a nominal fee). Participants must apply for admission during the regular application filing period and be admitted under regular admission requirements. Participants register for classes on a space-available basis after regularly matriculated students have completed registration. 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 body 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. The president shall provide to the Campus Fee Advisory Committee a report of all campus-based mandatory fees. The campus shall report annually to the chancellor a complete inventory of all campus-based mandatory fees.

For more information or questions, contact the Budget Office in the CSU Chancellor's Office at 562-951-4560.

## 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. The institution may also report the debt to a credit bureau, offset the amount due against any future state tax refunds due the student, refer the debt to an outside collection agency and/or charge the student actual and reasonable collection costs, including reasonable attorney fees if litigation is necessary, in collecting any amount not paid when due.

If a person believes he or she does not owe all or part of an asserted unpaid obligation, that person may contact Student Account Services, Student Account Services, or another office on campus to which Student Account Services 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.



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# Financial Aid and Scholarships

## 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 92182-8220. 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.gov>.

Applications are reviewed and aid awarded throughout the year based on available funding. To receive first priority evaluation of your eligibility for all financial aid programs, complete the FAFSA by March 2 and, by April 1, submit all financial aid documents requested. An application and documents submitted after these dates will receive second priority evaluation and aid awarded based on available funding at the time.

### 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.

## 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 \$372 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**

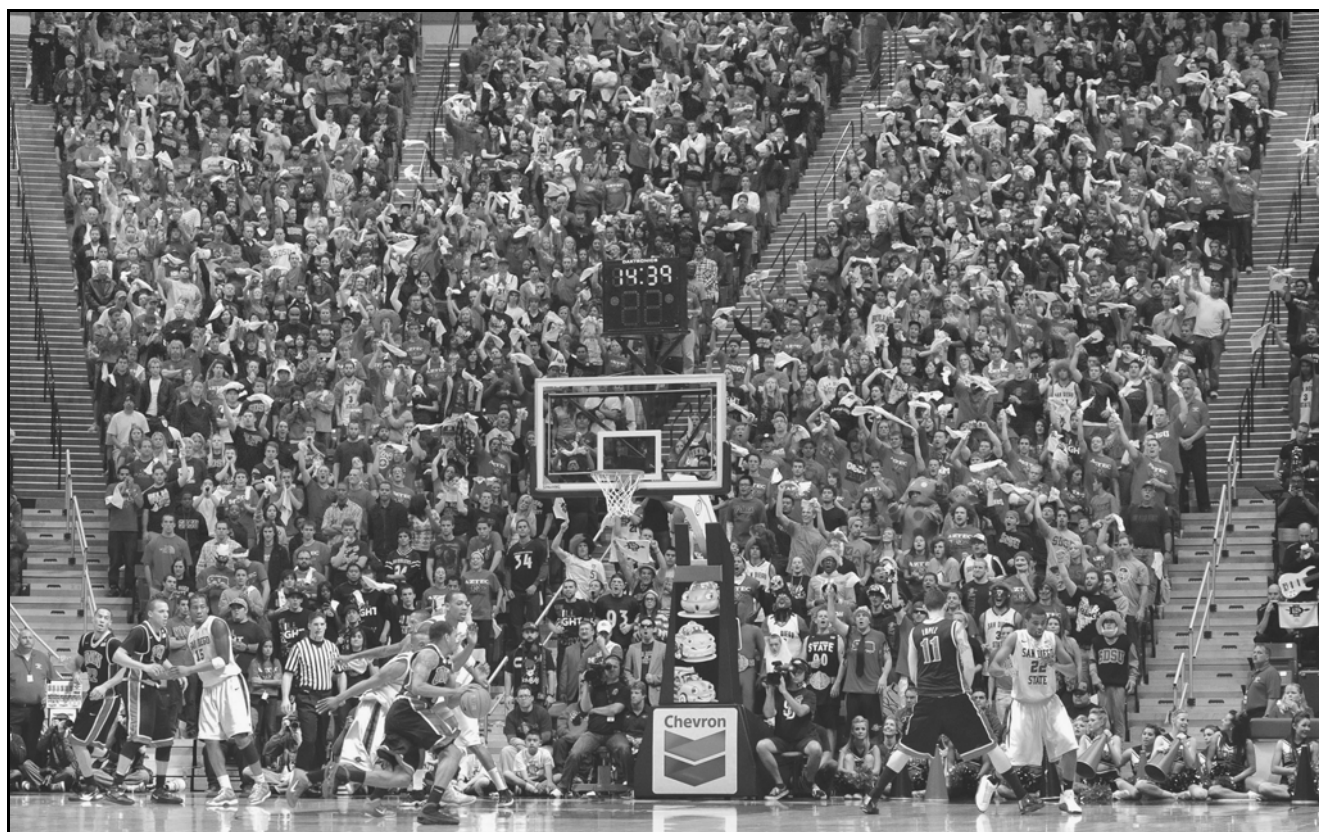
The Office of Academic Scholarships receives annual announcements of the Fulbright, Marshall, Kent, Rotary, and other national fellowship programs. Since each campus is limited in the number of applications it may endorse, students interested in fellowships of this type are encouraged to discuss their 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 or conditionally classified graduate students and must enroll for a minimum of six units of coursework each semester they hold the fellowship. Fellowships range from \$500 to \$2,000 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).

### **Chancellor's Doctoral Incentive Program**

The Chancellor's Doctoral Incentive 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 Chancellor's Doctoral Incentive 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 Chancellor's Doctoral Incentive 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 Chancellor's Doctoral Incentive Program coordinator in the Division of Graduate Affairs. You may also obtain an application and information at <http://www.calstate.edu/hr/cdip/>.



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# Student Services

## 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 is the central campus resource for career development and employment opportunities. The center provides a full range of programming, resources, and opportunities that support student success. Primary services and resources include the following:

### Career Counseling

Career counselors guide students on topics that range from choosing a major, to locating and applying for internships, to finding summer jobs and full-time employment. Career counselors work with students to assess their professional strengths, to develop skills such as resume writing and job interviewing, and to connect students to professional communities. They also work with students to manage the use of ever-expanding online resources and social media.

### Aztec Career Connection

Aztec Career Connection (<http://career.sdsu.edu>) – Students develop successful careers by having an online presence. Career Services provides SDSU students with Aztec Career Connection, the SDSU online portal for identifying and pursuing employment opportunities. This robust resource lists many jobs, internships, and on-campus interviewing opportunities. It also provides outstanding online resources for career development. These exclusive online resources include:

- TypeFocus – career assessment and planning;
- Perfect Interview – practice interviewing;
- Going Global – a resource for working and living abroad;
- Strong Interest Inventory - career assessment (fee-based).

To register on Aztec Career Connection, students use their SDSU RedID as their username and password to create an account.

### Employers and Employment Opportunities

Career Services partners with employers to offer students a range of internships, full- and part-time jobs, and volunteer opportunities. The center hosts employer information sessions, networking events and professional workshops where students can learn about an array of industries and occupations while interacting directly with recruiters.

### Career Fairs and On-Campus Interviews

Career Services provides career fairs throughout each academic year. These fairs range in size and scope. Visit Aztec Career Connection for a schedule of events. In addition to career fairs, Career Services brings employers to campus throughout the year to conduct on-campus interviews. On-campus interviews provide a unique opportunity for SDSU students to meet employers on campus at Career Services and interview for full-time and internship opportunities. On-campus interviewing networking gives students a competitive advantage in their job searches. Work with a career counselor to learn more, or visit Aztec Career Connection.

### Career Resource Room

The career center offers students a space to explore career options. Computer stations provide access to assessments, Aztec Career Connection and software for developing resumes and other

professional correspondence. This room also holds numerous print publications on career topics such as what to do with a variety of majors, how to develop a resume, how to prepare for and seek employment in any number of specific industries, and what options exist for graduate and professional schools. Reading and working spaces allow students to use many resources and interact with the student assistants and peer advisers.

### Campus Connections

Career Services leverages campus contacts to empower students and strengthen the SDSU community. Career Services partners with on-campus areas, such as academic internship coordinators, college faculty, Residential Education, Student Disability Services, Student Life and Leadership, Academic Advising, Associated Students, and the Alumni Association. WorkAbility IV is an award-winning partnership with Student Disability Services and the State Department of Rehabilitation. This service provides career-focused support to qualified students. Visit Career Services or Student Disability Services to learn more.

### Visit the Career Center

Career Services is open 8 a.m. to 4:30 p.m., Monday through Friday. Call or stop by to schedule individual appointments with career counselors. Fast-15 walk-in appointments are held daily. Visit the center's Web site for current schedule information. SDSU alumni are offered services for a fee. For more information, please contact our center.

## Counseling & Psychological Services (C&PS)

**Calpulli Center, Room 4401**  
**619-594-5220**  
**<http://www.sdsu.edu/cps>**

Counseling & Psychological Services (C&PS) provides a variety of services to enrolled SDSU students.

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
- Grief and Loss
- Managing Test Anxiety
- Mindfulness Meditation
- Relationship Skills
- Stress Management

Telephone consultation services are also 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 for consultation during business hours from 9:30 a.m. to 4 p.m., 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. Seven stations are set up to promote health and personal growth, including a Meditation Station, hands-on activities that

promote relaxation and stress reduction, pamphlets, books, audio and video tapes addressing topics such as: 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 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.

Other services available at C&PS include:

- Biofeedback Clinic for stress reduction;
- Bounce Back – course designed to help students on academic probation;
- Breakthrough – course designed for incoming freshmen to facilitate their transition to college;
- ASPIRE – individualized program designed for students to deal with substance use;
- Online Resources – intervention and assessment tools for anxiety, depression, disordered eating, alcohol and other substance use, trauma, stress, and relationships;
- Groups and Workshops – COPE, Mindfulness Meditation, Living with Loss, Successful Community Living, Alcoholics Anonymous.

The C&PS peer educators offer students who are selected, trained and supervised an opportunity to provide outreach to other students. The C&PS student advisory board members provide advocacy for students' mental health needs, a service sponsored by SDSU Associated Students.

## **Housing Administration and Residential Education**

**6050 Montezuma Road**  
**Telephone: 619-594-5742**  
<http://www.sdsu.edu/housing>

Graduate students are given preference at Piedra del Sol (PdS), Emerald Isle (EI), and Aztec Corner East apartments. These complexes are all leased on a 12-month basis. Piedra del Sol (PdS) and Emerald Isle (EI) are unfurnished; Aztec Corner East is fully furnished. Piedra del Sol (PdS) leases by the apartment and offers 66-units including two-, three-, and four-bedroom units. Emerald Isle (EI) is an older 24-unit complex offering studios and a few one- and two-bedroom units. Aztec Corner East is a 60-unit complex and leases by the individual space and by the whole apartment.

Graduate students may also choose one of the eight traditional residence halls including Chapultepec, Tenochca, Zura, or University Towers. Students needing housing over the breaks may select University Towers, which remains open over Thanksgiving, winter, and spring breaks. These halls house students for the academic year. Early application and contracting is highly recommended. Space is reserved on a first-come, first-serve space available basis. You may request a License Agreement by visiting the SDSU WebPortal under the housing section.

The Villa Alvarado Apartments are a 90-unit complex and 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.

## **Intercultural Relations/ Cross-Cultural Center**

**Aztec Center, Room 202**  
**Telephone: 619-594-7057**  
<http://www.sa.sdsu.edu/intercultural>

The Office of Intercultural Relations/Cross-Cultural Center researches, designs, and implements unique programs that promote the appreciation of cultural diversity and fosters intercultural and cross-cultural understanding.

Intercultural Relations provides programs and services that support the academic mission of the university by enhancing the educational, personal, cultural, and social development of students. Intercultural Relations strives to build positive advocacy and collaborative relationships with the general student body with a special emphasis towards underrepresented student populations.

Many of the programs and services expand students' cultural horizon while honoring their respective cultural experiences. Intercultural Relations works in conjunction with a number of university departments and colleges to conduct programs related to recruitment, orientation, retention, and graduation in addition to academic, personal, professional and cultural development, which foster skills and strategies for being successful at SDSU.

## **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 more than 1,900 international students from more than 95 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.

## Student Services

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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 2007).

### 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 19 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.** Concordia University (Montréal), McGill University (Montréal), Université Laval (Québec City)

**Chile.** Pontificia Universidad Católica de Chile (Santiago)

**China.** Peking University (Beijing), Shanghai Jiao Tong University (Shanghai)

**Denmark.** Danish Institute for Study Abroad (international education affiliate of the University of Copenhagen)

**France.** Institut Catholique de Paris, Université de Provence (Aix-en-Provence), Universités de Paris I, III, IV, VI, VII, VIII, X, XI, XII, XIII, Université Paris-Est Marne-la-Vallée, Université d'Evry Val d'Essonne, and Université de Versailles Saint-Quentin-en-Yvelines.

**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, 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.** Nelson Mandela Metropolitan University, Port Elizabeth

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

**Sweden.** Uppsala University

**Taiwan.** National Taiwan University (Taipei), National Tsing Hua University (Hsinchu)

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

International Programs pays all tuition and administrative costs for participating California resident students to a similar extent that such funds would be expended to support similar costs in California. Participants are responsible for all tuition and program fees, personal costs, such as transportation, room and board, and living expenses. Financial aid, with the exception of Federal Work-Study, is available to qualified students.

To qualify for admission to the International Programs, in most 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 Canada, China, France, Germany, Korea, Mexico, Sweden and Taiwan. 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.

Additional information and application materials may be obtained on campus, or by writing to The California State University International Programs, 401 Golden Shore, Sixth Floor, Long Beach, California 90802-4210. Visit our Web site at <http://www.calstate.edu/ip>.

## 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 that 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.

## Student Disability Services (SDS)

**Calpulli Center, Room 3101**  
**619-594-6473**  
**<http://www.sa.sdsu.edu/sds>**

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 to advise how best to utilize campus resources. Prior to receiving assistance, students must furnish appropriate medical documentation 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 for their writing. Other services available when appropriate include priority registration for students demonstrated need; transportation on campus; accessibility information; provision of

instructional materials in accessible formats; sign language interpreters or real-time captioning for deaf students; accommodated testing equipment loans (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 partners with Career Services and the state Department of Rehabilitation to offer enhanced career and employment services to students who are DOR clients. SDS is also the recipient of a federal Student Support Services grant to serve at-risk undergraduates with enhanced academic support services to increase retention and graduation rates among students with disabilities.

## Student Health Services

**Calpulli Center**  
**Telephone: 619-594-5281**  
<http://shs.sdsu.edu>

All regularly enrolled SDSU students have prepaid a health fee as part of their tuition and fees which entitles them to basic medical services. Some services, including annual Pap smears and pharmacy, require a minimal fee. We accept California's Family PACT program that covers the costs of contraception and sexually transmitted disease testing and treatment. Charges associated with these services are dramatically lower than those found elsewhere. This care is provided at Student Health Services, located in Calpulli Center, where health care providers offer a wide range of programs and services.

Services include medical care by physicians board certified in family medicine, internal medicine, orthopedics, psychiatry, dermatology, and preventive medicine, and by certified primary care nurse practitioners; laboratory, x-ray, eye care, and dental 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 immunization to **Student Health Services**. Positive laboratory evidence of measles and rubella is also a way to prove immunization status. 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 classes 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 provide proof of immunity against hepatitis B during their first semester at SDSU. Hepatitis B vaccination consists of three timed doses of vaccine over a minimum four to six month period. (*All students are encouraged to consider immunization against Hepatitis B.*)

Students may fulfill the immunization requirement by bringing or sending medical documentation of immunization or positive laboratory evidence of hepatitis B 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 do not comply with this California State University mandate during their first semester at SDSU will **not** be allowed to register for classes 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 can be mailed to SDSU Student Health Services, Immunization Program, 5500 Campanile Drive, San Diego, CA 92182-4701, brought to the Calpulli Center information window OR faxed to 619-594-7469 (include name, address, telephone number, date of birth, and SDSU RedID 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 at a reduced cost.

### Strongly Recommended Health Screening

Immunization from the following diseases may also protect students against potentially severe infections: tetanus, diphtheria, pertussis (whooping cough), 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 at 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 appointments in advance. Those with problems requiring immediate medical attention can make same-day appointments. All appointments can be made by either calling Student Health Services or visiting the Information Booth on the first floor of Calpulli Center. Student Health Services is open twelve months of the year. Services are available from 8:30 a.m. to 4:30 p.m., Monday, Tuesday, Wednesday, Friday, and on Thursday from 9:15 a.m. to 4:30 p.m. 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.

### Medical Excuse Policy

SDSU Student Health Services will not provide medical excuses for short-term absences due to illness or injury. In circumstances when the illness or injury is prolonged (an absence of more than five days) and requires medical attention or hospitalization, we will work with students to provide appropriate documentation. When a student is hospitalized or has a serious, ongoing illness or injury, SDSU Student Health Services will, at the student's request and with the student's consent, communicate with the student's academic adviser and/or Student Disability Services.

Students are instructed to contact their professor/instructor/coach in the event that they need to miss class, etc. due to an illness, injury, or an emergency. They may use an informational letter explaining the Student Health Services policy that is available from our office and on our Web site at <http://shs.sdsu.edu>. All decisions about the impact of an absence, as well as any arrangements for making up work, rest with the instructors. Academic advisers are available to provide assistance to students or faculty members who have concerns about attendance issues.

### Student Health Advisory Board

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

### Accidents and Student Insurance Coverage

First aid is also provided to faculty, staff, and campus guests for accidents and injuries occurring on campus with the understanding that individuals requiring any care beyond first aid will be transferred to the most appropriate medical facility. First aid is defined as one-time treatment that typically does not require a physician, laboratory, x-ray, or pharmacy services. 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 through either nursing/allied health training, or in a teacher training program are covered under the university's Workers' Compensation program provided an internship agreement between the university and the facility has been executed by an authorized representative of the university. The university is providing Student Professional Liability insurance to its students who are enrolled in these programs. This coverage is provided through Lloyd's of London. Students needing proof of this coverage for their participation in an institution's affiliation program can obtain a copy of the certificate of liability from their professor.

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 on a yearly basis. An open enrollment period is available the beginning of each semester and the policy may be purchased 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 students.

## Student Life & Leadership

**Student Services West, Room 1661**  
**619-594-5221**

- **Civic Learning and Community Engagement** – offers programs and resources to SDSU students, faculty, staff, and community members interested in participating in community service and service-learning. <http://www.sa.sdsu.edu/ccbsl>
- **Fraternity and Sorority Life** – is currently comprised of 46 social fraternities and sororities, including both general and culturally based organizations, represented by four governing councils. For more information, refer to *Fraternity and Sorority Life* in this section of the catalog or <http://www.greeklife.sdsu.edu>
- **Leadership Programs** – personal growth events and activities, including the Leadership Certificate Program, leadership and personal growth workshops, a special leadership class for credit, and the Quest for the Best Vice Presidential Student Service awards.

- **Student Organizations and Activities** – facilitates on-campus status for student organizations, implementation of policies and procedures with regard to student activities, and approval of all on-campus activities, including fundraising events.  
<http://www.sacl.sdsu.edu/studentorgs>

## Student Rights and Responsibilities

**Student Services, Room 1604**  
**619-594-3069**  
<http://www.sa.sdsu.edu/srr>

The Center for Student Rights and Responsibilities is responsible for acting on behalf of the university president regarding all aspects of student discipline. The office receives reports of alleged student misconduct relative to Title 5, *California Code of Regulations*, and investigates complaints in order to determine whether university disciplinary action is to be pursued. University disciplinary action may run concurrently with civil or criminal action and/or the residence hall eviction process, which is initiated by the court system. One type of judicial action does not necessarily affect the other.

Campus related violations include both academic and non-academic misconduct, misconduct in the off-campus surrounding community, off-campus community-sponsored events, and online sites.

To review SDSU's Statement of Student Rights and Responsibilities, visit <http://www.sa.sdsu.edu/srr>.

## Student Testing, Assessment and Research (STAAR)

**Student Services, Room 2549**  
**619-594-5216**  
**FAX 619-594-5036**  
<http://www.sdsu.edu/testoffice>

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 on the STAAR 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 and 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.

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# Special Programs

## Academic Computing

SDSU provides access to a large number of software packages including programming languages, the Microsoft Office Suite (word processing, spreadsheets, presentations), relational databases, statistical software, and large research-oriented databases. E-mail accounts are provided to students and server accounts are available for those who want to create Web sites.

The university has more than 2,000 desktop computers located in 80 departmental/college computer laboratories. The largest laboratories, which are open to all students, are the Student Computer Center located in Love Library, Room 200 (PCs, Macintoshes, and printing) and the College of Arts and Letters Laboratory, located in Professional Studies and Fine Arts, Room 136 (PCs and printing). Outside of the laboratories, students may connect to the wireless network which covers the entire campus. Many SDSU instructors use the Blackboard learning management system to communicate with students, post grades, distribute materials, and facilitate learning activities beyond the classroom. Student accounts in Blackboard are automatically created upon enrollment and use the same login credentials as the SDSU WebPortal. Access to courses in Blackboard occurs when instructors make their courses available to students. The Blackboard Web site is <http://blackboard.sdsu.edu>.

## Instructional Technology Services

Instructional Technology Services (ITS) provides support and leadership to the university in the effective uses of technologies for enhancing learning as well as facilitating research and strategic initiatives. ITS fulfills its mission by fostering collaboration and innovation with faculty and university stakeholders in the design, development, and effective use of learning environments and educational media.

ITS, located on the first floor of the Adams Humanities building, provides a variety of faculty-focused support services, including:

- Consultation, workshops, and collaboration via the SDSU Course Design Institute on the design and facilitation of effective learning experiences and environments, whether face-to-face or online;
- A Faculty Instructional Technology (FIT) Center located in Adams Humanities, Room 1109 that provides an informal environment for faculty consultations, collaboration, and development of instructional, professional, and research materials;
- Training and support for instructional software including:
  - Blackboard (web-based learning management system that allows faculty to facilitate learning online);
  - Wimba (web-based conference system that enables voice interactivity and webinar capabilities through Blackboard or independently);
  - Turnitin (writing support software available through Blackboard);
  - Respondus (assessment building software enhancing the question pool and quiz/test functions of Blackboard);
  - Software enabling faculty to record lectures from their classroom or office for students to view at their convenience;
  - Response system (or clickers) enabling greater interactivity in classrooms;
- Graphic, video, and multimedia consultation, design, and production;
- Assistance with design and development of instructional materials to be accessible and useful to diverse learners;
- Video conference systems for distance learning, allowing faculty to teach at SDSU and the Imperial Valley Campus (or other distant sites) simultaneously. This live, real-time, two-way audio/video communication system can also be used for research and professional development purposes;

- ITS-managed learning spaces, including a Learning Research Studio (for faculty interested in teaching in a technology-rich space and taking an inquiry-oriented approach to teaching and learning with technology);
- Instructional equipment loans (including laptop computers and video/data projectors, portable public address systems, digital cameras, camcorders, digital audio recorders, and much more);
- Campus-wide cable television system serving all classrooms.

For more information, call 619-594-5910 or go to <http://its.sdsu.edu>.

Instructional Services on the Calexico campus can be accessed by calling 760-768-5545 or going to East Faculty, Room 124C. On the Brawley campus, faculty members need to check with the coordinator who can be reached by calling 760-768-5787.

## Smart Classrooms

For instruction using multimedia and computer technologies, smart classrooms provide high technology presentation systems. Each classroom system includes an instructor station installed with a Macintosh/PC computer; video/data projector; DVD/VHS and/or VHS player; visual presenter/document camera for projection of print, transparency, and three-dimensional materials; and (in large halls, theatres and auditoriums) a public address system with wireless microphone unit and assistive listening device.

As of fall 2010, 93% of the teaching spaces on campus are considered smart classrooms. Requests for smart classrooms should be made through your department or school administrative coordinator.

## San Diego State University Research Foundation

San Diego State University Research Foundation, incorporated in 1943, is an auxiliary organization authorized by the Education Code of the State of California. It is a nonprofit corporation chartered to augment the educational, research, and community services objectives of the university. SDSU Research Foundation serves the university in the following major areas:

- Assisting faculty and staff in developing and administering federal, state, and privately funded projects.
- Seeking funding sources, offering grant-related workshops, assisting with proposal development and submission, and interpreting agency guidelines and policies.
- Developing project budgets, obtaining university approvals, and negotiating sponsored grant and contract awards.
- Assisting with staff recruitment, and purchasing support for funded projects.
- Providing technology transfer services, protecting intellectual property, commercializing technology developed at the university, and assisting spin-out companies based on SDSU inventions.
- Identifying, acquiring, and managing real property in support of sponsored programs not housed in university facilities.
- Accounting and financial reporting support for research and project funds, scholarships, institutes, and The Campanile Foundation.

SDSU 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 board is to establish policies and guide the corporation in achieving its objectives.

SDSU Research Foundation is located in the Gateway Center at 5250 Campanile Drive. More information is available at <http://www.foundation.sdsu.edu> or by calling 619-594-1900.

### 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 exchanges 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

Associated Students (AS) is an independent student-directed corporation that is one of the largest student governance organizations in the CSU system. As an affiliate of San Diego State University, the programs and facilities AS manages are enjoyed by students, faculty, staff, and the SDSU Community. Associated Students can be reached by calling 619-594-6555 or visit <http://www.as.sdsu.edu>.

**Student Government.** The Associated Students (AS) Government Affairs Office is the home to all student government activities on campus. The AS Council is the representative voice for all SDSU

students and the student government leaders work hard every day to ensure that the interests of students are served. Aside from serving as the student council, elected AS representatives also serve a dual role, as the Board of Directors for the AS, which is a non-profit student directed corporation that operates eight fully-functional facilities on and off of campus and a number of programs and services. The Government Affairs Office is the first stop for students who wish to get involved with Associated Students. The office also oversees the AS Legal & Financial Services Program as well as the Good Neighbor Program. More information is available by calling 619-594-6555, or online at <http://www.as.sdsu.edu/govt>. The Government Affairs Office is located on the 2nd floor of the Parma Payne Goodall Alumni Center, Suite 230.

**Aztec Center Student Union.** The Aztec Center served as the hub of student life at SDSU from 1968-2011. The original Aztec Center was demolished in summer 2011 to make way for a new, state of the art, LEED Platinum Aztec Center Student Union, which is scheduled to open in fall 2013. In the interim period, services provided by Aztec Center, such as meeting rooms in Aztec Mesa and Scripps Cottage, and CASE programming (Cultural Arts & Special Events), will be handled out of our temporary space in Aztec Mesa. CASE programming will continue during the closure period, and provide high-quality, FREE events for SDSU students during the academic semesters. For more information, call 619-594-5278, visit [http://as.sdsu.edu/new\\_aztec\\_center](http://as.sdsu.edu/new_aztec_center) or e-mail [asmtgsvs@mail.sdsu.edu](mailto:asmtgsvs@mail.sdsu.edu).

**Children's Center.** The Children's Center, a quality service of Associated Students, provides an educational childcare program for children between 6 months and pre-kindergarten-5 years of age. Priority for enrollment starts with SDSU students, followed by children of faculty and staff, and then children of SDSU alumni and the larger community as space is available. The Center serves as the Laboratory School for the Child and Family Development Department within the College of Education. In addition, the Center collaborates with other campus departments in support of academic research, observational learning and opportunities to link academic coursework with hands-on learning while working with children and families in the Center. The Children's Center is located in the lower "E Lot," north of Parking Structure 6. For more information call 619-594-7941, e-mail [ccc\\_info@mail.sdsu.edu](mailto:ccc_info@mail.sdsu.edu), or visit [www.childcare.sdsu.edu](http://www.childcare.sdsu.edu).

**Viejas Arena.** Home to Aztec Men's and Women's Basketball, Viejas Arena is San Diego's premier venue for everything from concerts to sporting events, family shows, conventions, conferences, and corporate and university events. 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 Viejas 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.viejasarena.com> for more information

**Open Air Theatre 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. Built in 1934, this 4,800 seat amphitheater has played host to sold out concerts, lectures, symphonic performances and university events. Generations of guests have enjoyed this theater'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 619-594-0234 or visit <http://www.viejasarena.com>.

#### Aztec Recreation.

**Aztec Recreation Center (ARC).** The Aztec Recreation Center (ARC) is a 76,000 square foot state-of-the-art fitness and recreation facility operated by Associated Students/SDSU. The ARC is the hub to all Aztec Recreation programs and has home offices for many of the department programs. ARC membership includes access to programs and facilities including the ARC, Aztec Aquaplex, Tennis, Racquetball, Group Fitness classes, Intramural Sports leagues, as well as greatly discounted prices on selected Mission Bay Aquatic Center Rec Classes, Aztec Adventure outings and ARC Rec Classes. Call 619-594-PLAY or visit <http://www.arc.sdsu.edu> for more information.



**Aztec Aquaplex.** The Aztec Aquaplex is SDSU's outdoor swimming and recreation facility operated by Associated Students/SDSU Aztec Recreation. Aztec Recreation Center members get access to the Aquaplex for drop-in lounging, lap swimming and water fitness classes. The facility is shared with Aztec Athletics and is home to the Aztec Women's Swimming and Diving team as well as the Aztec Women's Water Polo team. Call 619-594-SWIM or visit <http://www.arc.sdsu.edu> for more information.

**Mission Bay Aquatic Center (MBAC).** The world-renowned Mission Bay Aquatic Center is Associated Students' waterfront facility offering watersports classes, rentals, and special events. Every semester, hundreds of students earn university credit while learning to wakeboard, surf, kayak, sail, row, or windsurf in one of the semester-long School of Exercise and Nutritional Sciences watersport activities classes. Located off-campus at 1001 Santa Clara Point in Mission Beach, MBAC is just a short ride by car or is easily accessible by the San Diego Trolley and San Diego MTS. Call 858-488-1000 or for more information visit <http://www.mbaquaticcenter.com>.

**Aztec Adventures.** Aztec Adventures has provided SDSU with leadership, education, and culture since 1977 and is a program of Associated Students/SDSU Aztec Recreation. The Aztec Adventures philosophy; traveling in the outdoors by simple means is a healthy alternative to our normally technology-dependent lifestyles. In addition to outdoor trips, the Aztec Adventures team operates the climbing wall located inside the Aztec Recreation Center and offers a team building program for student clubs and organizations. For more information call 619-594-6958 or visit <http://aztecadventures.sdsu.edu>.

**Aztec Tennis Courts.** The Aztec Tennis Courts feature 12 lighted outdoor courts and are available for drop-in recreation for Aztec Recreation Center members. This facility is an Athletics facility home to both Men's and Women's Aztec Tennis Teams; however, Aztec Recreation Center members are granted access through programming provided by Associated Students/SDSU, Aztec Recreation. The courts are accessible through the Aztec Aquaplex at 5375 Remington Road, adjacent to Tony Gwynn Stadium.

**Recreational Sports Racquetball Courts.** The Rec Sports facilities are a program of Associated Students/SDSU and access to the courts is available to Aztec Recreation Center members. The facility includes eight indoor courts, free equipment check-out, and racquetball ladder tournament. The courts are located in Peterson Gymnasium 196.

**Intramural Sports.** SDSU students, faculty, staff, and ARC members have the opportunity to participate in recreational activities on a competitive or recreational level. Intramural sports leagues are available in a variety of indoor and outdoor sports throughout the year. Individuals can form a team with friends or sign-up independently. The intramural sports fee is included in the ARC membership.

**Sports Clubs.** The SDSU Sports Clubs program consists of 18 competitive collegiate club teams. Each club team is developed, organized, and managed by students with guidance from the professional staff and coaches. The emphasis for sport club activities is leadership. Sports Clubs thrive only by obtaining active student involvement and participation from club team leaders and its members. Sports Clubs compete in organized intercollegiate competitions at local, state, regional, and national levels. Both new and experienced student-athletes are actively recruited. In fact, many students are new to their sports. Sports Club teams are an excellent setting for the development of athletic skills, student leadership skills, and social opportunities.

## 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 13 sports for women (basketball, crew, cross country, golf, lacrosse, 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, lacrosse, 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; lacrosse, and water polo are members 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.

For more information please call 619-594-3019 or visit <http://www.goaztecs.com>.

### Student Athlete Support Services Aztec Athletics Center, Room 3029, 619-594-3395

Involvement with intercollegiate athletics on campus presents many challenges for students. This office provides guidance and assistance for these student-athletes in the areas of admission, registration, new student orientation, counseling, study hall, mentoring, tutoring, and academic advising. The office also serves as a liaison between faculty and the Athletic Department. This individualized program is designed to create an academic support network to ensure all student-athletes comply with university requirements while working toward completion of a degree.

## Audiology Clinic and Speech-Language Clinic

Administered by the School of Speech, Language, and Hearing Sciences, the clinics provide assessment and remediation services for SDSU students, staff, faculty, and the community. In addition, the clinics offer opportunities for research, consultation, supervised field internships, continuing education, and other service activities.

In the Speech-Language clinic, 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, and hearing loss. 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.

In the Audiology Clinic, Audiologic services include hearing assessment, hearing aid evaluation and selection, assistive listening device evaluations, earmolds, ear protectors, hearing conservation and aural rehabilitation therapy

The clinics are located at 5245 Campanile Drive, San Diego, CA 92182-1518 and can be reached at 619-594-7747.

### 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 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:

**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.

**Concessions** – Aztec Shops operates the concession stands at the Open Air Theatre, Tony Gwynn Stadium, and Viejas Arena.

**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.

### California State University Program for Education and Research in Biotechnology (CSUPERB)

Susan Baxter, Executive Director

Created in 1987 as a CSU system-wide program, the California State University Program for Education and Research in Biotechnology (CSUPERB) develops a professional biotechnology workforce by mobilizing and supporting collaborative CSU student and faculty research, innovating educational practices, and responding to and anticipating the needs of the life science industry. The CSUPERB program office is hosted at San Diego State University. CSUPERB promotes biotechnology workforce development by supporting innovative coursework and pro-grams, real-world research experiences, and core resources for faculty and students at all 23 CSU campuses. The program involves students and faculty from life sciences, physical sciences, clinical sciences, engineering, agriculture, math, business and computer science departments and programs. CSUPERB organizes the annual CSU Biotechnology Symposium and serves as the official biotechnology liaison for the CSU with government, educational, and industry partners. In addition, CSUPERB administers and manages a small business administration (SBA) award to develop biotechnology industry responsive curricula.

CSUPERB recognizes that modern biotechnology preparation requires the integration of coursework, hands-on practice and participation in multi-disciplinary, team-based research projects. CSUPERB grants and awards programs have been developed to support these activities system-wide. Programs include: Howell-CSUPERB Research Scholars Awards for undergraduate student researchers, the Crellin Pauling Student Teaching Awards, the Don Eden Graduate Student Research Awards, Travel Grants programs for students and faculty, the New Investigator Grants, the Research Development Grants, the Entrepreneurial Joint Venture Grants, and Biotechnology Programmatic Development Grants. In combination these programs award more than \$650,000 to CSU faculty and students annually.

CSUPERB programs and activities are administered by an Executive Director, a strategic planning council composed of faculty and deans from CSU campuses, and a faculty consensus group composed of four faculty representatives from each CSU campus. CSUPERB is overseen by a Presidents' Commission composed of CSU presidents from CSU Channel Islands, CSU East Bay, CSU Los Angeles, CSU San Marcos, Humboldt State University, San Diego State University, and an Executive Vice Chancellor. Visit the program Web site at <http://www.calstate.edu/csUPERB> for more information.

### Parking and Transportation

When possible, carpooling or use of alternate modes of transportation is recommended for the commute to campus.

Metropolitan TTransit System's Green Line trolley and seven bus routes (11, 14, 15, 115, 856, 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 Viejas Arena 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 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 Viejas 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.

## **The Joan and Art Barron Veterans Center**

The Joan and Art Barron Veterans Center serves as the hub for all student veteran support services at SDSU. The Center supports the state, regional and campus-wide Troops to College programs. The Center offers eligible veterans, dependents, or reservists assistance with applying for education benefits, coordinating the Veterans Affairs work study program, and processing tutorial assistance paperwork. Student veterans also have access to on-campus housing in the Veterans House and can socialize with other students by joining the Student Veteran Organization.

The following educational benefits are available to veterans and dependents at SDSU:

- Chapter 33 (Post-9/11 GI Bill)
- Chapter 33 (Post-9/11 GI Bill - Transfer of Entitlement)
- Chapter 30 (Montgomery GI Bill - Active Duty)
- Chapter 31 (Vocational Rehabilitation)
- Chapter 1606 (Montgomery GI Bill - Reservists)
- Chapter 1607 (Reserve Educational Assistance Program)
- Chapter 35 (Dependents Educational Assistance)
- California Veterans Fee Waiver Program (Dependents of Veterans with a Service-Connected Disability)

Note that in order to receive 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 about veteran services, contact the Joan and Art Barron Veterans Center, Student Services West, Room 1575, at 619- 594-5813, or on our Web site at <http://www.sdsu.edu/veterans>.



# Aztec for Life



Every year in March, SDSU celebrates its relationship with the alumni, students, faculty, staff and friends who have played a part in its rich and dynamic history.

The celebration is a highlight of the Aztec year with its many art exhibits, academic and athletic events and special offers.

Join us during SDSU Month and celebrate what it means to be an Aztec for Life.

*Celebrating the minds  
that move the world.*



PARMA PAYNE GOODALL ALUMNI CENTER

**Visit [sdsumonth.com](http://sdsumonth.com) to learn more.**

# PART THREE

Division of Graduate Affairs

Division of Research Affairs

Colleges

Library and Information Access

Imperial Valley Campus

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# Division of Graduate Affairs

**OFFICE: Student Services East 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 such fields as education, English, history, and philosophy. They directly supported the historical mission of the institution to train teachers who 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. 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 such areas 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 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, 19 Ph.D. programs serve several hundred students. Some of these doctoral programs are in traditional academic disciplines whereas others had a more professional orientation 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 Educational Leadership.

By many measures, San Diego State University has become a competitive national doctoral research university. During the decade of the 2000s, the faculty generated about one billion dollars from extramural sources in support of student and faculty research and professional activity. 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.

## 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 SDSU Veterans Center located in Education, Room 151, for information and counseling regarding veterans' benefits prior to the date of registration.

### 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.

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://www-rohan.sdsu.edu/~gra/grad/gatahandbook.html>.

### 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://www-rohan.sdsu.edu/~gra/grad/gatahandbook.html>.

### 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.

**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>.

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# Division of Research Affairs

## Research Affairs

The Division of Research Affairs is responsible for the institutional approval of all grant proposals and contracts relating to sponsored research, instruction, and service agreements; administration of research regulatory and intellectual property services; administration of intramural faculty grants, 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.

## 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; Dr. Mark A. Sussman, Professor of Biology; Dr. John P. Elder, Professor of Public Health; Dr. James F. Sallis, Professor of Psychology, and Dr. John R. Weeks, Professor of Geography. The Web site is <http://www-rohan.sdsu.edu/~gra/grad/research/researchlectures.html>.

### University Grants Program

The University Grants Program (UGP) was created to integrate independent funding mechanisms through which faculty derive internal support for creative and scholarly research. These internal funding sources now include: Research, Scholarship, and Creative Activity (RSCA) awards, the Faculty Development Program (FDP), Faculty Grant-in-Aid for Research (GIA), the Adams Humanities Endowment and the Office of the Provost. The Division of Research Affairs administers the UGP. For more information, contact the Division of Research Affairs at 619-594-5938 or visit the Web site at <http://gra.sdsu.edu/research/ugp>.

### 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/grad/research/intproptechdev.html>.

### 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. In addition, members of this committee assist in the review of Graduate Student Travel Fund applications and make recommendations for the Inamori Fellowship program. For more information, visit the Web site at <http://gra.sdsu.edu/research/srs>.

### Faculty Recognition Committee

The Faculty Recognition Committee monitors criteria for significant national awards, and matches those criteria with the accomplishments of SDSU's most productive faculty, to promote them for such awards. This committee is primarily composed of associate deans because of their strong service commitment and overview of faculty from throughout their respective colleges.

### 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>.

## Graduate Research Centers and Institutes

### California State University Program for Education and Research in Biotechnology (CSUPERB)

Susan Baxter, Executive Director

Created in 1987 as a CSU system-wide program, the California State University Program for Education and Research in Biotechnology (CSUPERB) provides vision, leadership, and support for biotechnology education and research throughout the CSU to promote economic development in California. The CSUPERB program office is hosted at San Diego State University. CSUPERB promotes biotechnology workforce development by supporting innovative coursework and programs, real-world research experiences, and core resources for faculty and students at all 23 CSU campuses. The program involves students and faculty from life sciences, physical sciences, engineering, agriculture, business and computer science departments and programs. CSUPERB organizes the annual CSU Biotechnology Symposium, sponsors industry-responsive curriculum including Professional Science Masters programs, and serves as the official biotechnology liaison for the CSU with government, educational, and industry partners. In addition, CSUPERB administers and manages a small business administration award to develop biotechnology industry responsive curricula.

CSUPERB administers awards and grants programs for CSU biotechnology students and faculty aimed at integrating discovery, learning, and professional workforce development to meet the evolving needs of the biotechnology industry and related life science endeavors. Programs include: Howell-CSUPERB Research Scholars Awards for undergraduate student researchers, the Crellin Pauling Student Teaching Awards, the Don Eden Graduate Student Research

Awards, Travel Grants programs for students and faculty, the Faculty-Student Collaborative Research Seed Grants, the Entrepreneurial Joint Venture Matching Grants, and Biotechnology Programmatic Development Grants. In combination these programs award over \$650,000 to CSU faculty and students yearly. Three CSUPERB core facilities offer services at reduced rates for CSU faculty and students: the Microchemical Core for DNA synthesis and sequencing at SDSU, the CMoS Core for x-ray crystallography at CSU Fullerton, and the Facility for Elemental Micro-Chemical Analysis (FEMCA) at CSU Long Beach offering elemental and molecular analysis technologies.

CSUPERB programs and activities are administered by an Executive Director, a strategic planning council composed of 10 faculty and deans from CSU campuses, and a faculty consensus group composed of four faculty representatives from each CSU campus. CSUPERB is overseen by a Presidents' Commission composed of CSU presidents from CSU East Bay, CSU Los Angeles, Cal Poly San Luis Obispo, Humboldt State University, San Diego State University, and an Executive Vice Chancellor. The program Web site is <http://www.cal-state.edu/csUPERB/>.

### Mount Laguna Observatory

Paul B. Etzel, Director

San Diego State University operates Mount Laguna Observatory under special permit from the US Forest Service some 45 road miles east of the campus at an elevation of 6100 feet in the Cleveland National Forest. The current research telescopes include two reflectors with apertures of 24- and 40-inches; a new 48-inch reflector is being built jointly with the University of Kansas. Each has a modern telescope control system that allows for remote and robotic observing over the Internet via high-speed (45 Mbps) wireless connectivity through the University of California, San Diego. Auxiliary equipment includes multiple CCD cameras, Near-IR camera, CCD spectrograph, and photoelectric photometers. Support facilities include a shop building, dormitory and apartments for observers. Associated with the observatory is the Awona Harrington Visitor Center, which supports educational programs and visiting astronomers. The 21-inch Buller telescope serves General Education classes on the main campus, and limited public outreach programs in the summer months with the US Forest Service. 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: [scerpca@mail.sdsu.edu](mailto:scerpca@mail.sdsu.edu). The Web site is <http://www-rohan.sdsu.edu/~irsc/scerp.htm>.



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# College of Arts and Letters

## Administration

Dean: Paul Wong  
Associate Dean: Eniko Csomay  
Associate Dean: Linda D. Holler  
Assistant Dean for Student Affairs: Leslie S. Johnson  
Director of Development: Nancy Lemkie  
Director of Resource Management: Lesley Bryant

## General Information

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

## Curricula Offered

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

### Doctoral Program

Geography

### Master's Degrees

Anthropology (M.A.), Asian Studies (M.A.), Chicana and Chicano Studies (M.A.), Creative Writing (M.F.A.), Criminal Justice and Criminology (M.S.; jointly with the College of Professional Studies and Fine Arts), Economics (M.A.), English (M.A.), French (M.A.), Geography (M.A., M.S.), History (M.A.), Latin American Studies (M.A., M.B.A./M.A.; jointly with the College of Business Administration, M.P.A./M.A.; jointly with the College of Professional Studies and Fine Arts, M.P.H./M.A.; jointly with the College of Health and Human Services), Liberal Arts and Sciences (M.A.), Linguistics (M.A.), Philosophy (M.A.), Political Science (M.A.), Rhetoric and Writing Studies (M.A.), Sociology (M.A.), Spanish (M.A.), Women's Studies (M.A.).

### Preprofessional Curriculum

Prelegal

### Certificate Programs

Children's/Adolescent Literature, Computational Linguistics, Geographic Information Science, Professional Writing, Spanish Translation and Interpretation Studies, Teaching English as a Second or Foreign Language (TESL/TEFL), Teaching of Writing, United States-Mexico Border Studies, Women's Studies.

## Research Centers and Institutes

### 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.

For more information regarding the Africana Center, contact Dr. Cornwell at 619-594-4131.

### Center for Asian and Pacific Studies Lei Guang, Director

The Center for Asian and Pacific Studies brings together interested students, faculty, and community members, to promote teaching, research, and contemporary dialogues on the cultures and societies of Asia and the Pacific Rim and their relationships to North America. To explore East Asia, South Asia, Southeast Asia, the Pacific Rim, and Asian American communities, the center draws on the academic resources of multiple departments and programs within and outside of the College of Arts and Letters, including: anthropology, art, Chinese, comparative literature, economics, geography, history, Japanese, linguistics, philosophy, political science, religious studies, sociology, and women's studies. The center supports colloquia and symposia, curriculum development, student and faculty research, community research, international programs, and new college initiatives to educate students, community members, and working professionals about Asian and Pacific languages, cultures, politics, economies, histories, and societies. The center promotes faculty and student exchanges with Asian universities as well as study abroad programs in the Asia Pacific. The center houses the undergraduate major and minor in Asian studies, a minor in Chinese studies, as well as the graduate program.

### 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 contacting the department office at 619-594-2952 or on the Web site at [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. For more information, visit the Web site at <http://www-rohan.sdsu.edu/~csi/index.htm>.

**Confucius Institute**  
**Paul Wong, Executive Director**

The Confucius Institute (CI) at San Diego State University (SDSU) was established in collaboration with the Confucius Institute Headquarters (Hanban), the executive body of the Chinese Language Council International, a non-governmental and non-profit organization affiliated with the Ministry of Education of China. Housed in the College of Arts and Letters, the purposes of the CI of SDSU are to strengthen educational cooperation between China and the United States and to promote development of Chinese language education at the primary, secondary, and tertiary levels as well as at the community colleges. The CI at SDSU focuses especially on teacher training by offering both on-site and online classes while utilizing the most advanced language teaching pedagogy and technology. The CI at SDSU has a partner institution in China – Xiamen University, a distinguished national research university.

In conjunction with the Chinese program in the Department of Linguistics and Asian/Middle Eastern Languages, as well as other relevant academic units at SDSU, the institute supports and promotes the following activities:

- A teaching-training service center;
- Teach Chinese language and provide Chinese language teaching resources;
- Train Chinese language instructors;
- Hold Chinese proficiency tests and tests for the certification of Chinese language teachers;
- Provide information and consultative services concerning China's education, culture, economy, and so forth;
- Conduct language, trade mission, and cultural exchange activities;
- Conduct other activities in collaboration with Hanban and Xiamen University.

**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 office at 619-594-1880 or 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, Piotr Jankowski, 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. Visit the Web site at <http://ethics.sdsu.edu> for details.

**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 in the Department of European Studies at 619-594-5111, 619-594-7147, or [veronica.shapovalov@sdsu.edu](mailto:veronica.shapovalov@sdsu.edu).

**Center for Health Equity Research and Policy (CHERP)**  
**Brian K. Finch, Director**

The Center for Health Equity Research and Policy (CHERP) is housed in the Department of Sociology and brings together students, faculty, and community members to promote research and policy dissemination with respect to population health and health disparities towards the end of fostering health equity for disadvantaged populations. The center brings together faculty from several SDSU colleges, including: the College of Arts and Letters, the College of Health and Human Services, and the College of Sciences.

The purpose of CHERP is to generate cutting-edge research that both describes and explains the existence of health disparities in racial/ethnic minority and socio-economically disadvantaged populations. Further, relying on community collaborations, we seek to translate our research into practicable health alternatives using evidenced-based strategies. The ultimate goal of CHERP is to contribute to the understanding and elimination of health disparities that are the direct result of social inequalities which disproportionately affect disadvantaged and marginalized sub-populations across the United States, with a concerted and focused effort in the San Diego region.

The center promotes the following activities and infrastructure:

- A collaborative consortium of scholars and community members;
- An accessible database of relevant health surveys and data linkages;
- A collection of relevant statistical methodologies and their applications;
- A working paper series reflecting preliminary research results and findings;
- A periodic seminar series—open to the campus and local community;
- Links to published research findings;
- Translation and dissemination of research findings to the local and national media;
- A health equity community action board.

The center Web site is: <http://www-rohan.sdsu.edu/~cherp>.

### **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, Room 140 from 7-9:30 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**  
**Gangaram Singh, Faculty Director**  
**Siv Della Maestra, Assistant Director**

San Diego State University's Center for International Business Education and Research (SDSU CIBER) is a national center of excellence funded, in part, by a grant from the U.S. Department of Education. The overall mission of the national CIBER program is to help ensure the United States' long-term international competitiveness by supporting research, education, and outreach activities.

One of 33 centers nationwide, SDSU CIBER was one of the first five established in 1989 and assists in linking the manpower and information needs of U.S. business with the international education, language training and research capacities of universities across the nation. SDSU CIBER serves as a catalyst to further integrate and advance a number of diverse activities relating to international business education and research. Activities of SDSU CIBER include support for faculty research, international business and foreign language curricular initiatives, outreach and development programs for the business community, and training programs for language and business faculty. SDSU CIBER also organizes conferences, workshops, and seminars designed to improve our nation's capacity to compete in the global economy.

SDSU CIBER is located in the College of Business Administration, and collaborates with programs and colleges across the university. For more information, visit <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. Contact the center at 619-594-8040 or visit the Web site at <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.

**Center for Islamic and Arabic Studies**  
**Farid Abdel-Nour, 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 Farid Abdel-Nour at [abdelnou@mail.sdsu.edu](mailto:abdelnou@mail.sdsu.edu) or visit the Web site at <http://www.cias.sdsu.edu>.

**Center for Latin American Studies**  
**Ramona L. Pérez, 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 Affairs; 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.

For additional information, visit the Web site at <http://latinamericanstudies.sdsu.edu>.

**Lipinsky Institute**  
**Risa Levitt, Director**

The Lipinsky Institute supports the advancement for community outreach and the annual visiting Israeli professorship. To learn more, visit the Web site at <http://jewishstudies.sdsu.edu>.

**National Center for the Study of Children's Literature (NCSCSL)**  
**Jerome J. Griswold, Director**

Situated in the Department of English and Comparative Literature, the National Center for the Study of Children's Literature (NCSCSL) 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 NCSCSL 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, NCSCSL 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 NCSCSL review and evaluate contemporary children's books on the largest Web site of its kind in the country. For more information visit, <http://childlit.sdsu.edu/> or e-mail [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.

Visit the Web site <http://larcnet.sdsu.edu> for more information.

**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, contact the center at 619-594-2783, [CQR@sdsu.edu](mailto:CQR@sdsu.edu), or visit <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, 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 <http://geography.sdsu.edu/Research/Projects/ISYS/>.

**Social Science Research Laboratory (SSRL)**  
**Paul Wong, Director**

Established in 1974, the Social Science Research Laboratory (SSRL) is a full-service survey research center located on the campus of San Diego State University. SSRL was founded to support social research at San Diego State University and in the San Diego community. SSRL provides a full spectrum of survey research and program evaluation services to university faculty and administrators, as well as to local government, non-profit organizations, and the private sector. SSRL is capable of conducting telephone, web, mail, and multi-mode surveys. SSRL has 36 CATI stations and currently uses Sawtooth's WinCati for telephone data collection, Vovici for online data collection, and SPSS for data processing and analysis.

SSRL also provides graduate-level training in survey research methodology and practices through its Internship in Applied Survey Research and Program Evaluation. The goal of the internship is to provide eligible graduate students with field experience in survey research and program evaluation and an opportunity to apply the information and skills learned in their graduate program curriculum in a real-world social research setting.



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# College of Business Administration

The College of Business Administration and the School of Accountancy are accredited by 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. Visit the College of Business Administration Web site at <http://www.sdsu.edu/business>.

## Administration

Dean: Michael R. Cunningham  
Associate Dean for Academic Affairs: Gangaram Singh  
Director of Graduate Programs: David P. Ely  
Assistant Dean for Student Affairs: Sandra L. Williams  
Executive Director of Executive and Specialized Programs and External Affairs: Chris Graham  
Director of Resource Management: Debra Tomic  
Director of Undergraduate Program: Kathleen A. Krentler

## Mission of the College of Business Administration

The mission of the College of Business Administration at SDSU is to maintain a challenging learning environment that fosters excellence in business education and develops business professionals through innovative programs, applied learning, research, and collaboration with alumni and the local business community. Our programs reflect the international, entrepreneurial, hi-tech, and tourism character of our region and provide opportunities for students and faculty to integrate their academic work with experience in the San Diego community.

## General Information

All undergraduate and graduate programs have enjoyed continuous accreditation since their points of first application. In addition to a commitment to maintain a high quality, accredited program, the College has the following objectives: (1) academic programs that prepare students with the knowledge and skills needed to contribute to business and society as managers and professionals; (2) cooperation and mutual responsibility among faculty, staff, and students for learning and research; (3) opportunities for students to integrate their academic work with experience in the community; (4) faculty who are active as teachers and scholars and who share their professional expertise with students and the community; (5) staff members who maintain and improve their technical and interpersonal skills in order to contribute to the development and success of College programs; (6) programs that reflect the international and entrepreneurial character of our region; (7) physical and technical facilities that support program requirements; and (8) an environment that offers opportunities for students, faculty, and staff of diverse backgrounds to pursue their educational and career goals.

The College of Business Administration at SDSU aspires to be the educational backbone of the San Diego business community. To credibly serve one of the most dynamic regions in the nation and the world, we must achieve high national rankings in both undergraduate and graduate education and earn a national and international reputation for excellence in research. These objectives require us to understand and proactively adapt to the global and technological forces and the environmental, ethical and resource imperatives that are shaping the 21st century.

## Curricula Offered

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

### Master's Degrees

Accountancy (M.S.), Business Administration (M.S.), Business Administration (M.B.A., M.B.A./J.D.; jointly with the California Western School of Law, M.B.A./J.D.; jointly with the Thomas Jefferson School of Law), Latin American Studies (M.B.A./M.A.; jointly with the College of Arts and Letters).

### Certificate Programs

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

## Research Centers and Institutes

### 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 online resources and communication through the Web site at <http://capi.sdsu.edu>.

### Corporate Governance Institute (CGI)

Lori Versteegen Ryan, 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

## **Business Administration**

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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 at 619-594-5314, [CGI@SDSU.edu](mailto:CGI@SDSU.edu), or at <http://www.sdsu.edu/CorpGov>.

### **Entrepreneurial Management Center (EMC)**

**Sanford B. Ehrlich, QUALCOMM Executive Director**  
**Bernhard Schroeder, Director of EMC Programs**  
**Carmen Bianchi, Director of Family Business**  
**Alex DeNoble, Chair, Department of Management,**  
**College of Business Administration**

The Entrepreneurial Management Center (EMC) serves students and companies that contribute to the emerging growth sector of the regional business community. The mission of the EMC is to develop educational programs and research focused on best practices that promote entrepreneurship and innovation at the individual and organizational levels.

The range of entrepreneurial programs offered includes:

- (1) mentorship and advisory support to help students acquire the tools and skills necessary for new venture creation and development;
- (2) intern programs to provide experiential education for undergraduate and graduate students; and
- (3) organizational consulting and development.

The EMC focuses its program development on all areas of the entrepreneurial process including: investor financing, product innovation, management of technology, managing organizational growth, succession planning, leadership, talent management, branding and positioning, social media marketing, and estate planning.

The EMC sponsors and creates a myriad of programs and events at San Diego State University aimed at the campus population:

- Venture Challenge, a top global MBA business plan competition;
- EMC Business Forum for executives of closely-held/family businesses;
- QUALCOMM Social Entrepreneur Intern program;
- Center for the Commercialization of Advanced Technology;
- WebCompass, a undergraduate internship program aiding non-profits;
- L. Robert Payne Distinguished Entrepreneur Lecture Series;
- VentureStart Competition, business plan competition for all SDSU students;
- Lavin Entrepreneurs, an undergraduate cohort mentored by senior executives;
- Entrepreneur Day, yearly campuswide celebration of SDSU entrepreneurs;
- Entrepreneurs for Peace, global entrepreneur effort to stimulate peace.

For further information, contact the EMC in the Gateway Center, Room 1502, 619-594-2781, FAX 619-594-8879, and at <http://www.sdsu.edu/emc>.

### **Institute for Inclusiveness and Diversity in Organizations (IIDO)**

**Lynn M. Shore and Beth G. Chung, Co-Directors**

The purpose of the Institute for Inclusiveness and Diversity in Organizations (IIDO) 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 IIDO 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 IIDO 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 IIDO at 619-594-4309, [ishore@mail.sdsu.edu](mailto:ishore@mail.sdsu.edu), or at <http://www.sdsu.edu/iido>.

### **Center for International Business Education and Research (CIBER)**

**Mark J. Ballam, Managing Director**  
**Gangaram Singh, Faculty Director**  
**Siv Della Maestra, Assistant Director**

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SDSU CIBER is located in the College of Business Administration, and collaborates with programs and colleges across the university. For more information, visit <http://www.sdsu.edu/ciber>.

### **International Institute for the Commercialization of Biomedical Innovation (IICBI)**

**Gangaram Singh, Interim 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.

**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 [tom.warschauer@sdsu.edu](mailto:tom.warschauer@sdsu.edu).

**Corky McMillin Center for Real Estate**

**Michael Lea, Director**

The mission of the Corky McMillin Center for Real Estate is to improve the educational experience for real estate students at SDSU, foster academic research in the areas of real estate, and to act as a resource for real estate professionals, government and industry organizations.

The director of the center is a principal spokesperson for SDSU on real estate issues and organizes events for alumni, supporters, and students. The director teaches courses on various real estate topics, conducts real estate research, and represents the center at academic and industry meetings. The center hosts an array of real estate related events each year, aimed at promoting networking amongst professionals and students and informing the community of various real estate issues. The center will also sponsor a SDSU team in a local Real Estate Case Study Competition for undergraduate students.

The center was established in 2009 with a donation from the McMillin family who own one of San Diego's most successful real estate and development companies.

**Real Estate and Land Use Institute (RELUI)**

**Andrew Q. Do, Director**

Established in 1983, the Real Estate and Land Use Institute (RELUI) is the first system-wide 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-related areas. In support of this mission, the RELUI seeks to support, coordinate, and manage systemwide and intercampus research activities, to maintain liaisons with government and private agencies with an interest in public policy, and to provide scholarships and grants to qualified SDSU students.

At San Diego State University, the RELUI regional director is appointed by the campus president to serve as a member of the CSU Advisory Board of the California Real Estate Endowment Fund. For more information, contact Dr. Andrew Do at 619-594-5324, [andrew.do@sdsu.edu](mailto:andrew.do@sdsu.edu)

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# College of Education

## Administration

Dean: Ric A. Hovda  
Associate Dean: Jose Luis Alvarado  
Associate Dean for Faculty Development and Research:  
Assistant Dean for Student Affairs: Patricia Lozada-Santone  
Doctoral Programs: Marilee J. Bresciani, Cheryl L. Mason,  
Rafaela M. Santa Cruz, Cynthia L. Uline  
Manager of Budget and Analysis: Francis Fox  
Coordinator of Operations and Support Services: Julie White  
Coordinator of Office of Student Services: Lisa McCully

## General Information

The College of Education's mission is to prepare effective professionals for a variety of societal service delivery and leadership roles across a range of settings including schools, postsecondary institutions, social service agencies, and vocational rehabilitation organizations. The college contributes to the knowledge base in both educational theory and practice through professional inquiry and scholarship. The college engages in strategic partnerships with the field of practice to improve client outcomes, to increase institutional effectiveness, and to promote social justice.

The College of Education is organized into eight academic units including the School of Teacher Education and the following departments: Administration, Rehabilitation and Postsecondary Education; Child and Family Development; Counseling and School Psychology; Educational Leadership; Educational Technology; Policy Studies in Language and Cross-Cultural Education; and Special Education. The Master of Arts degree in education is offered in ten academic areas of education. The Master of Science degree is offered in three additional academic areas. The Educational Specialist degree is offered in school psychology. A Ph.D. program in education is offered jointly with Claremont Graduate University. This unique program features a social justice emphasis. A Ph.D. program in mathematics and science education is offered jointly with the College of Sciences and the University of California, San Diego. An Ed.D. program is offered in Educational Leadership with concentrations in PreK-12 and Community College/Postsecondary Leadership. An Ed.D. program is offered jointly with the University of San Diego in the following fields: Educational Technology and Teaching and Learning (but currently is not admitting new students). Approved teaching credential programs are offered for the multiple subject credential and the single subject credential, as well as for a number of specialist and service credentials.

## Curricula Offered

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

### Doctoral Programs

#### Ph.D. in Education

#### Ph.D. in Mathematics and Science Education

#### Ed.D. in Education

(currently not admitting new students)

#### Ed.D. in Educational Leadership

Concentration in PreK-12 Leadership

Concentration in Community College/Postsecondary Leadership

### Educational Specialist

#### Ed.S. in School Psychology (M.A./Ed.S.)

### Master's Degrees

Child Development (M.S.), Counseling (M.S.),  
Education (M.A., M.A.T.), Rehabilitation Counseling (M.S.).

## Teaching and Service Credentials\*

### Credential Program

1. Multiple Subject: part-time, full-time, and internship programs.
2. Multiple Subject 2042 Credential. Emphasis: Spanish, Arabic, Filipino, Japanese, or Mandarin.
3. Single Subject
4. Single Subject Bilingual 2042 Bilingual Credential. Emphasis: Spanish.

### School Service Authorized

Teach in self-contained classrooms and provide Specially Designed Academic Instruction in English (SDAIE) and English Language Development (ELD), kindergarten through sixth grade.

Teach in self-contained kindergarten through sixth grade classrooms and in primary language of emphasis and English, English Language Development (ELD), and Specially Designed Academic Instruction in English (SDAIE).

Teach single subject area grades 6 through 12 and provide Specially Designed Academic Instruction in English (SDAIE) and English Language Development (ELD).

Teach in single subject classrooms grades 6 through 12 in primary language of emphasis and English in kindergarten through 12th grade and provide Specially Designed Academic Instruction in English (SDAIE) and English Language Development (ELD).

\*Standards and authorizations are being reviewed and revised by the California Commission on Teacher Credentialing.

### Specialist Credentials

Reading/Language Arts  
Bilingual Cross-Cultural Specialist  
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

### Service Credentials

Administrative Services; Internship  
Clinical-Rehabilitative Services  
(School of Speech, Language, and Hearing Sciences)  
Pupil Personnel Services:  
Child Welfare and Attendance (School of Social Work)  
School Counseling (Department of Counseling and School Psychology)  
School Psychology (Department of Counseling and School Psychology); Internship Credential  
School Social Work (School of Social Work)  
School Nurse Services (School of Nursing)

### Certificate Programs

Academic Literacy Development for English Language Learners, Algebra Specialist, Behavior Analysis, Cognitive Disabilities, Community College Teaching, Developing Gifted Potential, Distance Education, Dual Language Bilingual, Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist, Early Childhood Special Education Authorization, Educational Facility Planning (offered through College of Extended Studies), Family Life Education, Institutional Research, Planning, and Assessment, Instructional Design, Instructional Technology, Mathematics Specialist, Reading, Primary Grade Writing Instruction, Psychiatric Rehabilitation, Rehabilitation Administration, Rehabilitation Counseling, Supported Employment and Transition Specialist, Workforce Education and Lifelong Learning, Teacher Induction: Fifth Year.

## Research Centers and Institutes

### 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.

For more information, visit the Web site at <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 Caren L. Sax and Fred R. McFarlane, Co-Directors

Interwork 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 has the following five centers:

- The Exceptional Family Resource Center (EFRC) was initially developed under the Department of Special Education. It was transferred to the Interwork Institute in 2006. They have been serving individuals and families of children with disabilities and the professionals who assist them throughout San Diego and Imperial Counties since 1990.
- The Collaborative for Distance Learning (CDL) provides the technology and instructional design support for all Department and Interwork activities. This has been in operation since 1993 when initial funding was received from the US Department of Education.
- The Center for Pacific Studies (CPS) provides research, training, and technical assistance services in partnership with institutions of higher education, government agencies, and non-profit organizations in the following Pacific Island jurisdictions: American Samoa, Republic of the Marshall Islands, Federated States of Micronesia, Territory of Guam, Commonwealth of the Northern Marianas Islands, Republic of Palau, and the State of Hawaii.
- The Center for Emerging Leadership (CEL) supports and educates youth and young adults with developmental disabilities through peer-to-peer mentorship as they transition into adulthood as leaders. This is funded by the Department of Health and Human Services, Administration for Children and Families, Administration on Developmental Disabilities. This was initially funded as a center under the corresponding grant competition in 2004.
- Circle for American Indian Rehabilitation (CAIR) is devoted to the continuing education, training, and technical assistance needs for programs funded through American Indian Rehabilitation Service Projects (Section 121 of the Rehabilitation Act).

The Interwork Institute's facilities are located at 3590 Camino del Rio North in Mission Valley. For more information visit the Web site at <http://interwork.sdsu.edu>.

### Center for Teaching Critical Thinking and Creativity Margie Kitano, Director, Professor Emerita

The Center for Teaching Critical Thinking and Creativity (CTCTC) advances performance and productivity in diverse communities by enhancing critical and creative thinking in schools. The center collaborates with teachers to develop and evaluate applications of research on critical and creative thinking applied to rigorous content and supported by appropriate technologies. CTCTC supports teachers' continued development of their own expertise while taking advantage of their knowledge, skills, and experience in assessing effects on students' critical thinking, creative productivity, and academic performance.

### Center for Learning, Instruction, and Performance Technologies Marcie J. Bober-Michel, 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** **Sharan A. Gibson, 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. For more information, visit <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. To learn more, visit the Web site at <http://www-rohan.sdsu.edu/dept/sdsutrio/>.

### **QUALCOMM Institute for Innovation and Educational Success** **Ric A. Hovda, David T. Hayhurst, 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 four components:

- *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.

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# College of Engineering

## Administration

Dean: David T. Hayhurst

Associate Dean: Randall M. German

Assistant Dean for Student Affairs: Lawrence C. Hinkle

Director of Doctoral Programs: Eugene A. Olevsky

## General Information

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

At the undergraduate level, the College of Engineering prescribes certain patterns of its courses, combined with those of other academic divisions of the university, leading to the Bachelor of Science degree in seven specific major fields of engineering. At the graduate level, the college offers the Master of Science degree in four of these fields and in bioengineering, a Master of Engineering degree, and doctoral degrees in bioengineering, electrical and computer engineering, mechanical and aerospace engineering, and structural engineering jointly with the University of California, San Diego.

Consistent with the role and mission of the California State University system, the faculty of the College of Engineering at San Diego State University believes its mission to consist of the following integrated components: To provide students with a quality undergraduate and graduate engineering education; to prepare graduates for professional careers and life-long learning; to promote the creation and dissemination of knowledge; to serve society through professional practice and community outreach; and to act as a catalyst for the technological development of the San Diego region.

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

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

## Accreditation and Academic Association

College of Engineering is a member of the American Society for Engineering Education. Undergraduate engineering programs in aerospace engineering, civil engineering, computer engineering, construction engineering, electrical engineering, environmental engineering, and mechanical engineering are accredited by the Engineering Accreditation Commission (EAC) of ABET, Inc., 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone: (410) 347-7700.

## Registration of Engineers

Professional registration of engineers is required for many fields of practice. Engineering students are encouraged to take the Fundamentals of Engineering examination prior to graduation. Graduation from an accreditation program such as San Diego State University facilitates registration as a Professional Engineer.

## Curricula Offered

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

### Doctoral Programs

Bioengineering,  
Electrical and Computer Engineering,  
Mechanical and Aerospace Engineering,  
Structural Engineering

### Master's Degrees

#### Master of Science (M.S.)

Aerospace Engineering, Bioengineering,  
Civil Engineering,  
Electrical Engineering, Mechanical Engineering

#### Master of Engineering (M. Engr.)

### Certificate Program

Rehabilitation Technology

## Research Centers and Institutes

### 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.

Learn more by visiting the Web site at <http://www.engineering.sdsu.edu/~sfrcl/>.

### **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. For more information, visit <http://www.engineering.sdsu.edu/energy.html>.

### **QUALCOMM Institute for Innovation and Educational Success** **David T. Hayhurst, Geoffrey W. Chase, Ric A. Hovda, Co-Directors**

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- 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 four components:

- *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.





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# College of Health and Human Services

## Administration

Dean: Marilyn Newhoff  
Associate Dean: Olita D. Harris  
Associate Dean: Stephen J. Williams  
Assistant Dean for Student Affairs: Donna M. Daly

## General Information

The College of Health and Human Services offers professional education in the health and human service disciplines. The college consists of the following group of professional areas: the Department of Gerontology, School of Nursing, School of Social Work, School of Speech, Language, and Hearing Sciences, and the Graduate School of Public Health.

The College of Health and Human Services' faculty, through advising, teaching, and supervising, offers students a balanced education of academic study, field placement, clinical experiences, and research opportunities. Thus, faculty and students share an understanding of the relationship between California's diverse populations and life styles. The common goal of each of the college's professional programs is to assist students in developing competence in professional practice and research methods leading to greater expertise for gathering information, planning, and evaluating professional actions. This commitment to students produces alumni who will continue to work effectively with our professional schools and departments so that the well-being of individuals, groups, and communities are both preserved and promoted.

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

## Curricula Offered

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

### Doctoral Programs

Audiology  
Language and Communicative Disorders  
Public Health (Epidemiology, Global Health,  
Health Behavioral Science)

### Master's Degrees

Gerontology (M.S.), Nursing (M.S.),  
Public Health (M.S., M.P.H., M.P.H./M.S.W., M.P.H./M.A.; jointly with the  
College of Arts and Letters), Social Work (M.S.W., M.S.W./M.P.H.,  
M.S.W./J.D.; jointly with California Western School of Law); Speech,  
Language, and Hearing Sciences (M.A.)

### Certificate Programs

Bilingual Speech-Language Pathology, Gerontology, Preventive  
Medicine Residency, Social Work Administration.

### Credential Programs

Child Welfare and Attendance Services, Pupil Personnel Services  
(School Social Work), School Nurse Services, Speech Language  
Pathology.

## Research Centers and Institutes

### Center for Alcohol and Other Drug Studies

Thomas F. 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.

Visit <http://www.centerforaod.sdsu.edu> for more information.

### University Center on Aging

Thomas F. Reilly, Director

The University Center on Aging is administered by the School of Social Work. 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.

To learn more about the center, visit the Web site at  
<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.

Visit <http://behavioralhealth.sdsu.edu> to learn more.

### **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). For more information, visit <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.

Visit <http://www.cdlhn.com> to learn more.

### **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 center can be contacted at 619-594-4813 or at <http://www.consensus.sdsu.edu>.

### **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 or at <http://www.bio.sdsu.edu/heart/sdsuhome.htm>.

### **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.

Contact the director at [david.lawrence@sdsu.edu](mailto:david.lawrence@sdsu.edu), 619-594-1994, or visit the Web site at <http://www.cippop.org/>.

### **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** **Thomas F. Reilly, Director** **Jennifer Tutlow, 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 Bernardino, 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, and can be reached at 619-594-3546 or at <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 epidemiology, biostatistics, health promotion and behavioral science, occupational and environmental health, maternal and child health, health services management and policy, and global/border health. 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. Visit the institute online at <http://iph.sdsu.edu/>.

**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 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.

Visit the SPI Web site at <http://www.sdsu-spi.org> for additional information.

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# College of Professional Studies and Fine Arts

## Administration

Dean: Joyce M. Gattas

Associate Dean: Kathryn J. LaMaster

Assistant Dean for Student Affairs: Randi E. McKenzie

Director of Development: Mariel Berry

Director of Human Resources: Sonia Wright

## General Information

The College of Professional Studies and Fine Arts is committed to the pursuit of excellence in academic and artistic endeavors geared to enhancing the human enterprise. Composed of 11 departments and schools, the college is recognized for its excellent academic programs that create a bridge between university and community life by preparing students for professional careers in a wide spectrum of cultural, educational, social, economic, and technical fields.

The college houses the schools of Art, Design, and Art History; Communication; Exercise and Nutritional Sciences; L. Robert Payne Hospitality and Tourism Management; Journalism and Media Studies; Music and Dance; Public Affairs; Theatre, Television, and Film. The college also houses three ROTC programs which lead to commissioned officer status upon graduation. The Center for Hospitality and Tourism Management, the Institute of Public and Urban Affairs, the Production Center for Documentary and Drama, and the Institute for International Security and Conflict Resolution are the research centers that offer the campus and San Diego communities unique instructional opportunities and research.

The College of Professional Studies and Fine Arts is at the forefront of meeting and integrating the needs of community, corporate, government and educational goals. The college is uniquely positioned because of its dedication to and appreciation of traditional and non-traditional forms of scholarship and research reflecting a demographically changing society through its curriculum, research and outreach activities. Interdisciplinary collaboration is the hallmark of the college's academic programs, research and creative activity that enrich the quality of life, provoke the status quo, enhance understanding of cultural diversity and are at the cutting edge of technology.

## Curricula Offered

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

### Master's Degrees

Art (M.A., M.F.A.), City Planning (M.C.P.), Communication (M.A.), Criminal Justice and Criminology (M.S.; jointly with the College of Arts and Letters), Exercise Physiology (M.S.), Kinesiology (M.A.), Music (M.A., M.M.), Nutritional Sciences (M.S.), Nutritional Science and Exercise Physiology (M.S./M.S.), Public Administration (M.P.A., M.P.A./M.A.; jointly with the College of Arts and Letters), Television, Film and New Media Production (M.A.), Theatre Arts (M.A., M.F.A.).

### Military Curricula

Aerospace Studies, Military Science, Naval Science.

### Certificate Programs

Artist Diploma, Museum Studies, Performance, Public Administration (available at Imperial Valley Campus only), Transborder Public Administration and Governance (available through Extension only).

## Research Centers and Institutes

### 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 (1) integrates the arts on campus by designing collaborative courses across the arts and other disciplines; (2) 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; (3) initiates outreach programs throughout the community, and; (4) explores important issues and themes through educational opportunities, business forums, and artistic research.

### The J. Willard and Alice S. Marriott Foundation Student Center for Professional Development

Brian P. Blake, Director

The J. Willard and Alice S. Marriott Foundation Student Center for Professional Development is housed in the School of Hospitality and Tourism Management (HTM). The center provides support for internship programs related to the hospitality industry. It assists HTM students in finding internships and job placement through workshops, focus groups, and continuing conversations with industry leaders. Every HTM student spends two semesters working with the center, and again uses center resources at graduation. This experiential learning builds professional competencies which enhance effectiveness when students enter the workforce. The center serves as a testing ground to determine an individual's competence before hiring as a permanent employee.

### Center for Hospitality and Tourism Research Carl Winston, Director

The Center for Hospitality and Tourism Research 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.

Contact the center in Professional Studies and Fine Arts, Room 436 or at 619-594-4964.

### Sycuan Institute on Tribal Gaming Katherine Contreras, 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 and supported by an endowment from the Sycuan Tribal Council of the Kumeyaay Indians. Visit <http://htm.sdsu.edu/sycuan/index.html> for details.

**Institute of Public and Urban Affairs**  
**Mounah Abdel-Samad, Director**

The Institute of Public and Urban Affairs is located in the School of Public Affairs. 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. Visit the Web site at <http://spa.sdsu.edu/ipua.html> for additional information.

**Institute for Meetings and Events**

The Institute for Meetings and Events is focused on education and research dedicated to the application of professional principles in meetings and events. The mission of the institute is to enhance the skills and knowledge of students and professionals in this discipline.

The institute creates and delivers initiatives in executive development, research, and curricular innovation. It also offers symposia and similar forums to stimulate dialogue and discussion on key issues and to share knowledge in this new and dynamic discipline. The institute's functions include the conducting of timely research and innovation; collecting benchmarking data for "best practices"; creating symposia and community events; and educating students and others in the professions in meetings and events.

The institute involves faculty with expertise in a variety of disciplines such as project management, business, public relation, advertising, graphic design, communications, nutrition, and theater to create and disseminate new knowledge in the area of meetings and events.

**Theatre, Youth, Media, and Education (TYME) Arts Center**  
**Danielle J. Bedau, Director**

The Theatre, Youth, Media, and Education (TYME) Arts Center embraces a variety of unique programs, creative projects, research-based initiatives, and artistic production hosted by the School of Theatre, Television, and Film. The purpose of the center is to (1) engage SDSU students, current and future educators, young people, and leaders, in theatre and media arts education, in an on-going discussion of pertinent, relevant, and cutting-edge issues in fields such as Theatre for Young Audiences (TYA) and Youth Arts aesthetics, community-building and ethics and current methodologies; (2) train the next generation of theatre and media arts educators to both practice and analyze current trends and methods in the field of theatre and media arts education; (3) ignite creativity and a passion for the arts in our audiences through touring productions, the annual Theatre of the World Festival, and other theatrical and media production, and; (4) conduct original research and evaluation related to the field, and disseminate these findings on the center's Web site at <http://tyme.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.

For more information, visit the Web site at <http://www.rohan.sdsu.edu/dept/socgrad/TFM/productioncenter.html>.

**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.

To learn more, visit <http://womenintvfilm.sdsu.edu>.

**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. The center 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.

Learn more about the center at <http://www.cohp.sdsu.edu>.

**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.

**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.

**Institute for Leisure and Tourism Management**  
**Vinod Sasidharan, Director**

The Institute for Leisure and Tourism Management is a research and community service unit within the School of Hospitality and Tourism Management. 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 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.

To learn more about the institute, visit the Web site at <http://rtm.sdsu.edu/research/institute.html>.

**The Watchdog Institute**  
**Lorie Hearn, Executive Director**

The Watchdog Institute is housed in the School of Journalism and Media Studies. The institute is an independent, non-profit organization whose mission is twofold: (1) to produce investigative, data-driven journalism that informs the citizens of San Diego and Imperial counties and (2) to help develop the investigative journalists of the future. Through internships and other mentoring opportunities, the institute offers ways to enhance the learning experience of journalism students at San Diego State University. The institute is collaborative, not competitive, and seeks to distribute its work across multiple media platforms – print, broadcast and online – throughout the region. The institute is nonpartisan and does not engage in political advocacy. The Web site is <http://watchdoginstitute.org/>.



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# College of Sciences

## Administration

Dean: Stanley R. Maloy  
Associate Dean for Graduate and Research Affairs: Patrick J. Papin  
Associate Dean for Academic and Faculty Affairs: Catherine J. Atkins  
Assistant Dean for Student Affairs: Estralita Martin  
Director of Development:  
Director of Resource Management: Julie Mitsven

## General Information

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

## Curricula Offered

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

### Doctoral Programs

Biology (Cell and Molecular), Chemistry, Clinical Psychology, Computational Science, Ecology, Evolutionary Biology, Geophysics, Mathematics and Science Education.

### Master's Degrees

Applied Mathematics (M.S.), Astronomy (M.S.), Biology (M.A., M.S.), Biomedical Quality Systems (M.S.), Chemistry (M.A., M.S.), Computational Science (M.S.), Computer Science (M.S.), Geological Sciences (M.S.), Homeland Security (M.S.), Mathematics (M.A., M.S.), Microbiology (M.S.), Physics (M.A., M.S.), Psychology (M.A., M.S.), Radiological Health Physics (M.S.), Regulatory Affairs (M.S.), Statistics (M.S.).

### Certificate Programs

Biomedical Quality Systems, Biotechnology, Communications Systems, Geographic Information Science, Industrial/Organizational Psychology, Mathematics Specialist, Professional Computational Science, Regulatory Affairs, Single Subject Mathematics, Web and Mobile Applications Development.

### Preprofessional Curricula

Allied Health, Pre dental, Pre medical, Pre optometry, Pre pharmacy, Pre physician Assistant, Pre podiatry, Pre veterinary.

## Research Centers and Institutes

### Edwin C. Allison Center for Earth System History Stephen Schellenberg, Director

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 past and present faculty 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 and carbonate microsampling systems.

For more information about the center, visit the Web site at <http://www.geology.sdsu.edu/facilities/allisonctr/>.

### Center for Behavioral and Community Health Studies (BACH)

John P. Elder, Director  
Guadalupe X. Ayala, Elva Arredondo, Linda C. Gallo,  
Enrico Marcelli, Simon Marshall, Joni A. Mayer,  
Gregory A. Talavera, Senior Core Investigators

The Center for Behavioral and Community Health Studies (BACH) is located at 9245 Skypark Court, Suite 221, San Diego, CA 92123. The center was founded as The Center for Behavioral Medicine 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 10 investigators from four different colleges. The interdisciplinary center encourages participation from all of the university colleges and departments. Active investigators are from the Graduate School of Public Health, the School of Exercise and Nutritional Sciences, and the Departments of Psychology and Sociology. Center projects involve collaboration between scientists and clinicians from a variety of specialties, as well as a variety of other institutions, many of which emphasize Latino health. Funding for the center comes from National Institutes of Health, Centers for Disease Control, the State of California, and private foundations.

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://www.sdsuach.org>.

### 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.

### Center for Bio/Pharmaceutical and Biodevice Development

E. Dale Sevier, Director

The Center for Bio/Pharmaceutical and Biodevice Development 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).

Visit <http://interwork.sdsu.edu/cbbd/aboutus.htm> for additional information.

### **Coastal and Marine Institute (CMI)**

**Todd W. Anderson, Director**

The Coastal and Marine Institute (CMI) promotes marine science research, education, and public service at SDSU. CMI emphasizes research in near-shore coastal ecosystems and is composed of faculty among departments within and outside the College of Sciences. The institute operates the SDSU Coastal and Marine Institute Laboratory (CMIL) located on San Diego Bay, facilitating faculty and student research and fostering interaction and collaboration with other institutions, agencies, and the community. CMIL offers closed-circuit and flow-through seawater, environmentally controlled rooms, a wet lab, analytical lab, equipment room, dive locker, and shop. A large yard for boat storage, equipment storage, and outdoor mesocosms to conduct research is also provided. The institute is administered by a director and an advisory council consisting of faculty members from participating departments, including Biology, Chemistry, Geological Sciences, and the Graduate School of Public Health. Additional information about marine studies is available from the Coastal and Marine Institute director, from the College of Sciences, and from the CMI Web site: <http://www.sci.sdsu.edu/CMIL/>.

### **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 contacting the CSRC at 619-594 3430 or <http://www.sci.sdsu.edu/csrc>.

### **Institute for Ecological Monitoring and Management**

The Institute for Ecological Monitoring and Management (IEMM) provides a productive, interdisciplinary, and collaborative environment for research directed at developing new approaches, techniques and models for ecological monitoring and management. It engages in applied research that conducts science in service of policy and management, and works to translate science for policy makers and the larger community.

IEMM serves as a nexus to promote inter-department and inter-college research initiatives and facilitates the incorporation of academic and scientific expertise and involvement into relevant restoration, conservation and monitoring projects in the greater San Diego area. Its mission is to create an internationally and nationally recognized research entity. IEMM has three primary goals: research, training, and community service.

### **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 and the recently established SDSU Center for Regional Sustainability. 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**

**Patrick J. Papin, Interim 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, hydrogeology, and other field sciences are consistent areas of study. There are growing opportunities for interdisciplinary work as well as



for nontraditional 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 or through the 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 Patrick J. Papin, 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 campuswide 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 techno-logical 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. It also 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 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 Akshay Pottathil, 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 and especially internationally. 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 and worldwide. CITI pursues four major themes, which provide a 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. To learn more about the center, visit the Web site at <http://citi.sdsu.edu/>.

#### **Center for Research in Mathematics and Science Education (CRMSE)**

**Ricardo B. Nemirowsky, 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, mechanical engineering, 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 236, San Diego, CA 92120-5013. For more information, contact 619-594-4696. The center may also be reached via campus Mail Code 1862 and at <http://crmse.sdsu.edu>.

### 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.

Find out more about the center by visiting the Web site at <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, genotyping, 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 DNA sequences and genotypes. 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 of the SDSU MCF was derived from the National Science Foundation with matching funds provided by the State of California. The SDSU MCF is currently maintained by user-fee.

For more information call 619-594-1669 or visit [http://www.sci.sdsu.edu/dnacore/sdsu\\_dnacore.html](http://www.sci.sdsu.edu/dnacore/sdsu_dnacore.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 at 619-594-5655 or through the Master of Science degree Web site at <http://www.bio.sdsu.edu/cmb/masters.html>.

### Visualization (Viz) Center

Eric G. Frost, Director

The SDSU Visualization (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.

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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. 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. Open University courses earn nonmatriculated resident credit and enrollment for students not seeking an advanced degree or advanced certificate and 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 English language test or its equivalent (80 iBT/213 CBT, 6.5 IELTS).
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 is one of the most prestigious university-based ESL programs in the US. The American Language Institute (ALI) is able to offer its students many different programs and courses such as academic, conversational, and business English; English language and GMAT Preparation; study abroad; and teacher training. Programs offered by the ALI are as follows:

#### Intensive English for Communication

IEC is a 3 to 18 week course designed for students and professionals at all levels who want to develop and improve their practical English skills. Classes include eight hours of oral communication in addition to 12 hours of reading, writing, grammar, and listening per week. Students can choose from a variety of electives, pronunciation clinics, sports, and conversation clubs. [www.ali.sdsu.edu/iec](http://www.ali.sdsu.edu/iec).

#### Business English and Business for Global Practices Certificate

These programs benefit students interested in learning more about American business practices while also improving their English communication skills. Students may specialize in Business for Global Practices (BGP), a more advanced certificate program for professionals. Both programs have more flexible start dates and do not require an English language examination for admission. [www.ali.sdsu.edu/business](http://www.ali.sdsu.edu/business).

#### English for Academic Purposes

EAP is a full semester or summer term course for students planning to enter San Diego State University or other colleges or universities at the undergraduate or graduate level. Classes are offered in academic reading, writing, grammar, listening, notetaking, and speaking. Coursework is available in test preparation and business topics. Students may also choose from over 30 elective course offerings. [www.ali.sdsu.edu/eap](http://www.ali.sdsu.edu/eap).

### Pre-MBA

This program prepares students for graduate degrees in business, including MS, MA, and MBA. Highly advanced students may have the option to register for 3 to 6 units of SDSU courses in addition to their English classes. [www.ali.sdsu.edu/premba](http://www.ali.sdsu.edu/premba).

### Semester at SDSU

Students who meet SDSU's English proficiency requirement may register for 9 to 12 units through ALI's Semester at SDSU program. [www.ali.sdsu.edu/semester](http://www.ali.sdsu.edu/semester).

### Teacher Training Programs

Teacher training programs include the TESL/TEFL certificate, for those with little or no previous English language teaching experience who would like to teach English abroad, and the TEFL seminar, for teachers with a minimum of one year of previous English language teaching experience. [www.ali.sdsu.edu/teachertraining](http://www.ali.sdsu.edu/teachertraining).

### Customized Group Programs

The ALI can offer customized programs for special groups in fields such as business, teacher training, law, health care, sports medicine, youth groups, and others.

### Services

All full-time students at the institute are offered visa and immigration support and assistance, housing assistance, organized 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 [www.ali.sdsu.edu](http://www.ali.sdsu.edu) 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 Abroad 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.

For further information call 619-594-6398 or visit the Web site at: <http://www.ces.sdsu.edu/travel>

## Certificate Programs

A complete listing of certificate programs is in the Curricula Summary section of this bulletin.

## Extension Courses

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

Extension courses are offered each semester in a number of areas including education, business administration, public affairs, 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. These courses are listed in a special Extended Studies Catalog published three times a year. Some one-unit weekend courses are also offered throughout the 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. Graduate students who enroll in these courses normally do so for personal enrichment only. 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.

For more information, visit <http://www.neverstoplearning.net>.

## 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 to help 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 employers as a significant academic accomplishment.

Examples include casino gaming management, coaching, construction, contract management, human resources, hospitality, Lean Six Sigma, marketing, meeting and event planning, and project management.

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 cultural 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 advisers 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 Five 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 Computational Science with Concentration in Professional Applications**

This program focuses on professional applications of computational science. The program leads to careers in management of technology in a wide variety of fields. To enter, students must possess a bachelor's degree with a strong mathematical background. The student must complete a graduate program of 40 units. Approximate 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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# Library and Information Access

## Administration

Dean: Gale S. Etschmaier  
Associate Dean: C. Anne Turhollow (Interim)  
Director of Administrative Operations and  
Communication: Mark R. Lester  
Director of Information Technologies and  
Digital Initiatives: Mark Figueroa (Interim)  
Director of Access and Licensing Services: Sara Baird (Interim)  
Director of Development:

## Library Faculty

Emeritus: Bernice Barclay, Douglas Cargille, Lillian Chan, Kathleen Coleman, Neil Crisley, Fidelia Dickinson, Charles Dintrone, Joanne Goodwin, Carol Lea Goyne, Katalin Harkányi, Mary Harris, Gerald Johns, Alma Lamb, Ruth Leerhoff, Julio Martinez, Martha McPhail, Doris Murdock, Gerald Palsson, William Pease, Walter Posner, Gloria Rogers, Iliana Sonntag, Phillip White, Carole Wilson  
Librarians: Carolyn Baber, Robert Fikes, Bruce Harley, Linda Muroi, Michael Perkins, Cecilia Puerto, Stephen Savage, Julie Su, C. Anne Turhollow  
Associate Librarians: Anne Bahde, Laurel Bliss, Robert Carande, Marilyn Hall, Pamela Jackson, Keven Jeffery, Melissa Lamont, William Payne, Robert Ray, Linda Salem, Patrick Sullivan, Markel Tumlin, Charles "Wil" Weston  
Senior Assistant Librarians: Daniel Jergovic, Steven Kiczek

## General Information

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 intersection for the SDSU campus community, each year offering 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 2.2 million annual visits.

## Access

The library is open to the public 24-hours per day, except on holidays, recess dates, and between 1-7 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, and 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 Technologies and Digital Initiatives 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 online chat. Service desks are located in: Circulation/Course Reserves, Reference Services, Media Center, Current Periodicals and Microforms Center, and Special Collections.

## Holdings

The library's holdings include 1,726,854 monographs and bound periodicals; 630,300 government documents; 4,643,296 microforms; 142,161 maps; 23,525 sound and video recordings; and 6,978 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.

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# Imperial Valley Campus

**TELEPHONE: 760-768-5500**

**WEB SITE: <http://www.ivcampus.sdsu.edu>**

## Administration

Dean: David E. Pearson  
Associate Dean for Academic Affairs: Michael J. Sabath  
Assistant Dean for Student Affairs: Miguel Rahiotis  
Director of Business and Financial Services: Irma Martinez  
Director of Advancement:

## Faculty

Emeritus: Reynaldo Ayala, David Ballesteros, Breena E. Coates, Roger M. Dunn, Sergio D. Elizondo, Khosrow Fatemi, Leslie Garrison, Richard B. Hill, Bonnie Bess King, Nancy M. Livingston, Frank A. Medeiros, Alfred Merino, Dana W. Murphy, John L. Polich, Stephen B.W. Roeder, Richard W. Ryan, José L. Varela-Ibarra  
Professors: Donna Castañeda, Laurie Champion, Richard Neumann, Jeanette Shumaker  
Associate Professors: Carlos R. Herrera, Gregorio A. Ponce, Juan Carlos Ramirez-Pimienta, Michael J. Sabath, Barry G. Stampfl, Diana W. Verzi  
Associate Librarian: William R. Payne  
Assistant Professors: Lasisi Ajayi, Magdalena Altamirano, Eric Boime, Elizabeth D. Cordero, Fernando Rodriguez-Valls, Imre Tuba  
Lecturers: Suzanna Fuentes, Helina Hoyt, Brett Kofford, Richard Martin

## 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 offers the last two years of undergraduate education, graduate programs, and fifth year credential programs for teacher preparation. In addition, the Imperial Valley Campus offers, as part of its Freshman Program, first and second year undergraduate education to a select cohort of students planning to major in criminal justice, 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 some classes broadcast live from the campus in San Diego. The Imperial Valley Campus schedules many of 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.

Imperial County has a population of approximately 160,000 people. SDSU-Imperial Valley Campus is located on two sites, Calexico and Brawley. 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. 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, as agriculture is the largest industry in the Imperial Valley.

Student clubs, student government, lectures, art exhibits, and musical events enhance education for the approximately 1,000 students at SDSU – Imperial Valley Campus.

## Curricula Offered

### Master's Degrees

Master of Arts in Education  
Concentration in Educational Leadership  
Concentration in Elementary Curriculum and Instruction  
Concentration in Secondary Curriculum and Instruction  
Master of Public Administration (in cooperation with the San Diego campus)  
Master of Social Work (in cooperation with the San Diego campus)

### Certificate Programs

Business Administration  
Public Administration  
Single Subject Mathematics

### 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 (in conjunction with the College of Education)  
Mild/Moderate, Moderate/Severe.

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 the Imperial Valley Campus' 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 Center

### Center for Individual and Professional Skills Development Suzanna 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. 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.

## Facilities

The Calexico campus is located on an eight-acre city block in the heart of Calexico's civic center along the Mexican border. The campus facilities create a pleasing architectural harmony of old and new structures surrounding a spacious central lawn area, the Rollie Carrillo Quad. Adjoining the quad, the expanded library, Rodney Auditorium, and John Stepling Art Gallery provide academic and cultural resources for the entire community. Other buildings include classroom buildings, the administration building, faculty offices, computer labs, a bookstore, and the Student Union. The Brawley campus is a showcase of the latest instructional technologies, including a computer classroom, a video conference classroom, full computer and Internet presentation capabilities in all classrooms, as well as a computer laboratory for students to research and study individually or in groups.

## **Imperial Valley Campus**

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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 laboratory. 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 complete the CSUMentor application online at <http://www.csumentor.edu> and have transcripts sent to the Office of Admissions, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182-7455. Call 760-768-5667 for additional 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.

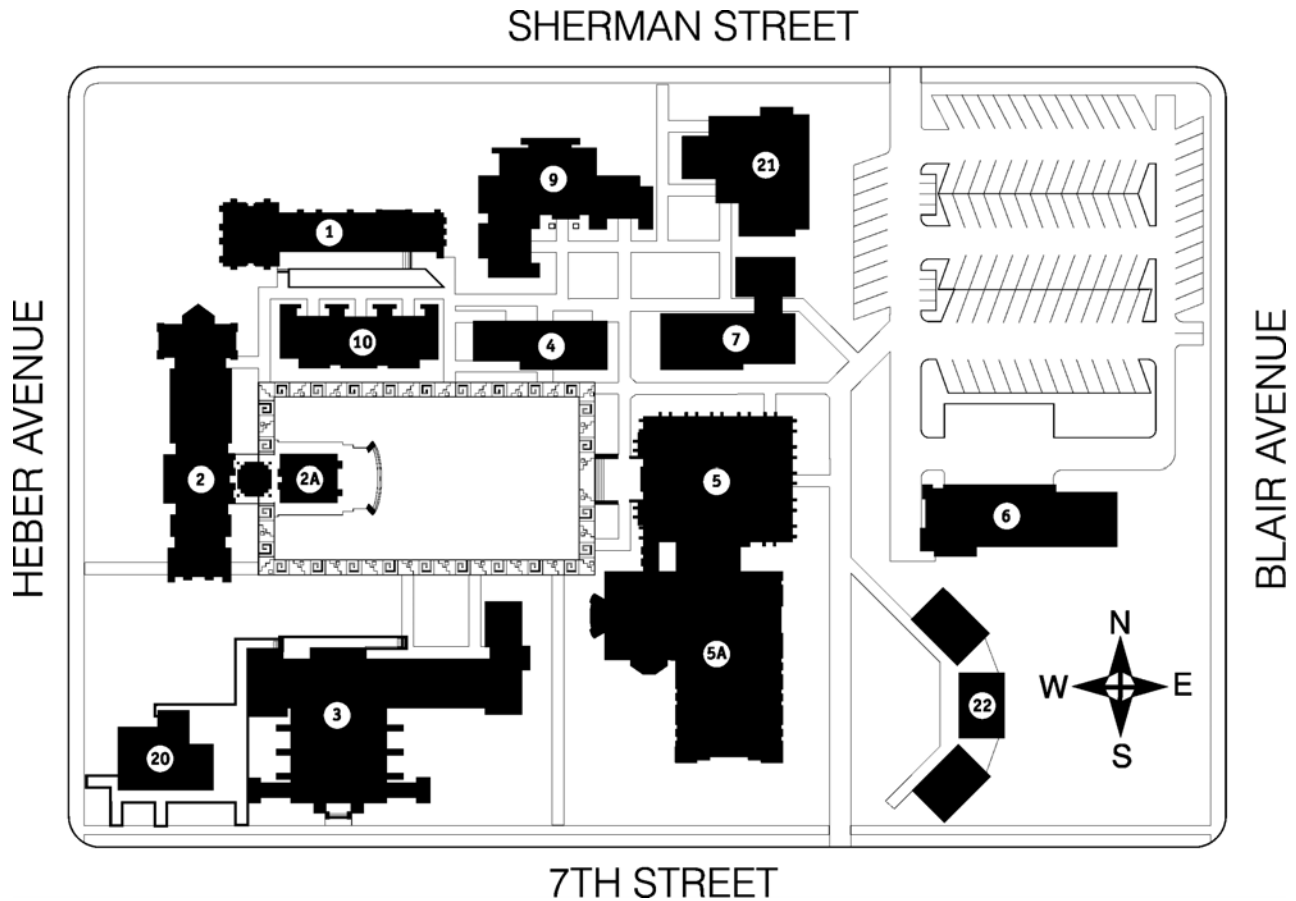
### **Commencement**

The Imperial Valley Campus holds its own commencement exercises each spring, in the Rollie Carrillo Quad, prior to commencement exercises on the San Diego campus.





Imperial Valley Campus – Calexico Campus Map

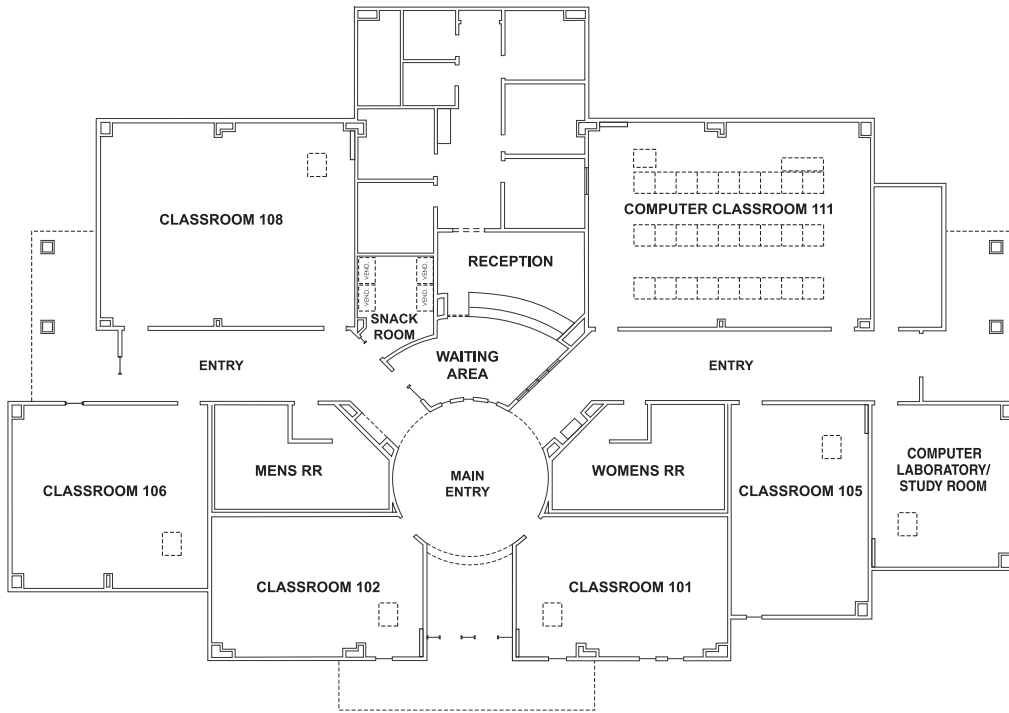


**SDSU IVC Campus – Calexico**  
**720 Heber Avenue**  
**Calexico, CA 92231**  
**760-768-5500**

**IMPERIAL VALLEY CAMPUS BUILDING LEGEND**

- |  |  |   |
|--|--|---|
| 1. North Classroom Building<br>(N-101, N-102, N-106, N-108)                      | 4. Classroom Building<br>(C-7, C-8, C-9, C-10) | 9. Faculty Offices: Building East<br>(Classrooms) |
| 2. Administration Building (Administration/<br>Academic Affairs/Business Office) | 5. Library                                     | 10. Faculty Offices: Building West                |
| 2A. Art Gallery  | 5A. Library Addition                           | 20. Student Center                                |
| 3. Auditorium/ Classrooms<br>(A-3, LA-1, LA-2, LA-3, LA-4)                       | 6. Physical Plant                              | 21. Student Affairs                               |
|  | 7. Computer Building                           | 22. CLAT – Classrooms                             |

**Imperial Valley Campus – Brawley Campus Map**



**SDSU IVC Campus – Brawley  
560 East Highway 78  
Brawley, CA 92227  
760-351-0806**

# PART FOUR

Requirements for Master's Degrees  
Requirements for Doctoral Degrees

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# 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 Five 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 and the student must be in good academic standing at the time of submission. 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 two consecutive semesters without an approved leave of absence.

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 Five 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. **No more than six units in courses numbered 797 and 798 will be accepted for credit toward the degree.**

### Master of Business Administration Degree

A minimum of 30 units and up to a maximum of 48 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 for programs of study consisting 33 or more units. Up to nine units of coursework may be accepted for transfer credit for programs of study consisting of 30 units. **Not more than a total of six units in courses numbered 780, 797, 798 will be accepted for credit toward the degree.**

### Master of City Planning Degree

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

### Master of Fine Arts in Art Degree

Sixty units of 500-, 600- and 700-numbered courses specified by the 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

A minimum of 51 units of approved 500- 600- and 700-numbered courses earned in graduate standing. Up to nine 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 course 798 will be accepted for credit toward the degree.**

### Master of Science in Counseling Degree

Sixty 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 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 12 units in course 744 will be accepted; no more than a total of 9 units in course numbered 745 will be accepted; and no more than a total of six units in course numbered 743 will be accepted toward the degree.**

### Master of Social Work Degree

Thirty eight units of 500-, 600-, 700- numbered courses for the Advanced Standing Degree or sixty units of 500-, 600-, 700- numbered courses for the Standard Degree as specified by the school of Social Work at least 30 of which must be completed in residence. Courses required to remove undergraduate deficiencies in addition to the minimum units for the degree. **Not more than six units in courses numbered 797 and 798 will be accepted for credit toward 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.

A grade point average of at least 2.85 must be maintained in all courses on the graduate record. 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

## Requirements for Master's Degrees

complying with IRB review requirements at the institution(s) in which they enrolled. IRB review application materials and guidance on the SDSU campus may be obtained via the Internet at <http://gra.sdsu.edu/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 a 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 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. In most cases, 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, organization, and 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 and 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 includes 799A, Thesis, on the official program of study. Course 799A represents three units of academic credit and can only be taken Credit/No Credit. A grade of "CR" is granted by the Division of Graduate Affairs upon thesis approval by the thesis committee, the department or school, and the Graduate Council. Students will not be permitted to register in 799A until they have been officially advanced to candidacy, and have an officially approved *Thesis or Project Committee Form* on file in the Division of Graduate Affairs. Unauthorized registration in this course may result in cancellation of enrollment.

One microfiche copy and one **electronic** 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

<http://www-rohan.sdsu.edu/~gra/grad/thesisreview/dtrmain.html>.

**Plan B**, requiring a comprehensive written examination in lieu of a thesis, may be followed in certain graduate degree curricula as indicated in Part Five 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 preceding 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 thesis chair. The student, graduate adviser, and committee chair will select the remaining faculty committee members. The student must obtain *The Appointment of Thesis Committee Form* from the Division of Graduate Affairs. This form must be signed by all committee members and the graduate adviser. The Division of Graduate Affairs will then review the composition of the student's committee, verifying that it meets university requirements.

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

Determination of whether the thesis research will involve human or animal subjects must be made at this point (see *Thesis/Dissertation Research Involving Human Subjects or Animal Subjects* in this section of the 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. The thesis committee will not be approved without appropriate research clearance.

Upon official approval of the thesis committee by the Division of Graduate Affairs, the student is eligible to enroll in 799A, Thesis. Enrollment must occur during the normal registration period each semester and the schedule numbers for registration are provided by the Division of Graduate Affairs. Registration dates and deadlines are listed in the academic calendar each year.

### 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 formal approval of the faculty thesis committee. Thesis manuscripts will only be accepted that conform to the format and presentation requirements specified by the Graduate Council and sponsoring department. These requirements are fully outlined in the *SDSU Dissertation and Thesis Manual*. The manual is available at <http://www.montezumapublishing.com/HOME/THESISDISSERTATIONS/THESISREVIEW/Procedures/tabid/212/Default.aspx>.

Students must be enrolled in 799A, Thesis, or 799B, Thesis Extension, in the term in which the thesis is granted approval by the faculty committee and submitted to Montezuma Publishing for review. Students will not be required to register for thesis in any subsequent term, provided the thesis is accepted by Montezuma Publishing by the end of the last working day of the semester in which the student is enrolled in 799A or 799B. Consult the academic calendar preceding Part One of this bulletin for specific deadline dates.

Manuscripts deemed unready for submission will be rejected and returned to the student. Manuscripts will be rejected in cases where the document contains gross deficiencies in format or presentation. Students who cannot meet the final deadline for submission because of such rejection will be required to enroll or reenroll in 799B and reapply for graduation for the following term.

A "CR" grade in 799A will only be granted upon approval of the thesis and payment of thesis filing fee. The Division of Graduate Affairs is solely responsible for the submission of grades for 799A and 799B. If the entire submission process is not completed by the publication deadline listed in the academic calendar, the student will be required to reapply for graduation for the term they expect 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 upon the completion of requirements. Students who intend to graduate must take the initiative. When they believe they are eligible, they should file an application via their web portal. Deadlines by which applications must be received in the Division of Graduate Affairs are published each year in the academic calendar and on the GRA Web site at:

<http://www-rohan.sdsu.edu/~gra/grad/gramain.html>.

A nonrefundable application fee of \$55.00 is required. All requirements must be completed by the graduation date. Candidates for graduation are not eligible to register for terms subsequent to the graduation date unless an application for readmission has been filed with Graduate Admissions. For all other graduation or cancellation information please visit:

<http://www-rohan.sdsu.edu/~gra/grad/appgradadvdgr.html>.

## 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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# 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 16 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 (Cellular and Molecular)**  
<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 (Bioengineering)**
- **Engineering Sciences (Electrical and Computer Engineering)**
- **Engineering Sciences (Mechanical and Aerospace Engineering)**
- **Engineering Sciences (Structural Engineering)**  
[http://www.engineering.sdsu.edu/engineering/joint\\_doctoral\\_program.aspx](http://www.engineering.sdsu.edu/engineering/joint_doctoral_program.aspx)
- **Geophysics**  
<http://geology.sdsu.edu>
- **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://publichealth.sdsu.edu/phdmain.php>

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)
- **Evolutionary Biology** (San Diego State University and the University of California, Riverside),  
<http://www.bio.sdsu.edu/ebj/deb.html>
- **Computational Science Statistics** (San Diego State University and Claremont Graduate University),  
<http://www.csrc.sdsu.edu/csrc/programs/phd.php>
- **Education** (San Diego State University and Claremont Graduate University), <http://edweb.sdsu.edu/doc>
- **Geography** (San Diego State University and the 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 Five of this bulletin under the departmental headings.

A doctorate in **Education (Ed.D.)** in educational leadership is offered by San Diego State University, <http://edleaders.sdsu.edu>. The specific requirements for this program will be found in Part Five of this bulletin under Education.

A doctorate in **Education (Ed.D.)** offered by San Diego State University and the University of San Diego. *This program is not accepting new students.*

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 Five 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 or the Claremont Graduate University, 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. 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. In doctoral programs with 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 or the Claremont Graduate University.
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 a 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/research/iacuc>.

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 (Mechanical & Aerospace/Bioengineering/Electrical & Computer/Structural), Evolutionary Biology, Geography, Geophysics, 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. 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.**



# PART FIVE

Summary of Curricula

Major Codes

Course Information

Courses and Curricula by Department

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# Summary of Curricula Offered

## Types of Curricula Offered

San Diego State University offers the following types of curricula:  
**Undergraduate Curricula.** Undergraduate curricula provide the following opportunities for study:

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

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

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

The School of Speech, Language, and Hearing Sciences offers curricula leading to clinical certification and graduate credentials in speech pathology, audiology, and speech, language, and hearing sciences.

The School of Nursing offers the Bachelor of Science degree and the Master of Science degree in Nursing (areas of concentration are advanced practice nursing of adults and the elderly, community health nursing, nursing education, and nursing leadership in health care systems) and offers a curriculum leading to registered nurse licensure, public health nurse credential, health services credential (school nurse services), and nurse educator.

(4) *Preprofessional and nondegree curricula:* Programs are offered in allied health, pre dental, pre legal, pre medical, and preveterinary leading to transfer to professional schools. Air Force, Army, and Naval ROTC programs are also available.

**Graduate Curricula.** The Division of Graduate Affairs offers curricula in the various colleges and departments leading to the Master of Arts and Master of Science degrees in a wide variety of fields, the Master of Arts in Teaching, the Master of Business Administration, the Master of Business Administration and Juris Doctor, the Master of City Planning, the Master of Engineering, the Master of Fine Arts in Art, the Master of Fine Arts in Creative Writing, the Master of Fine Arts in Theatre Arts, the Master of Music, the Master of Public Administration, the Master of Public Health, and the Master of Social Work, Master of Social Work and Juris Doctor.

Also offered are the Educational Specialist in school psychology, the Professional Doctorate in audiology, the Doctor of Education, the Doctor of Education in educational leadership, and the Doctor of Philosophy in bioengineering, biology (cell and molecular), chemistry, clinical psychology, computational science, ecology, education, electrical and computer engineering, evolutionary biology, geography, geophysics, language and communicative disorders, mathematics and science education, mechanical and aerospace engineering, public health, and structural engineering.

## Degrees and Certificates

San Diego State University offers the following authorized graduate degrees and certificates:

### DOCTOR OF PHILOSOPHY

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

- Biology (Cell and Molecular)
- Bioengineering
- Chemistry
- Clinical Psychology
- Computational Science
- Computational Science/Statistics
- Ecology
- Education
- Electrical and Computer Engineering
- Evolutionary Biology
- Geography
- Geophysics
- Language and Communicative Disorders
- Mathematics and Science Education
- Mechanical and Aerospace Engineering
- Public Health/Epidemiology
- Public Health/Global Health
- Public Health/Health Behavior
- Structural Engineering

### DOCTOR OF EDUCATION

- Education
- Educational Leadership
  - Community College/ Postsecondary Leadership
  - PreK-12 School 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	Media Production
Kinesiology	Theatre Arts
Latin American Studies	Women's 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 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  
 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: program evaluation  
applied psychology: industrial and organizational 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 management and policy  
health promotion and behavioral science

### *Concentrations (MS):*

toxicology  
*Concentrations (PhD):*  
epidemiology  
global health  
health behavior

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

*Concentrations:*  
communicative sciences  
speech-language pathology

### **Statistics (MS)**

*Concentration:*  
biostatistics

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

*Concentrations:*  
acting  
design and technical theatre  
musical theatre

## Credentials Offered

### **Teaching Credentials**

Multiple subject; internship  
Multiple subject cross-cultural language and academic development (CLAD) emphasis  
Multiple subject bilingual cross-cultural language and academic development (BCLAD) emphasis: Spanish; internship  
Multiple subject and special education bilingual (Spanish)  
Single subject; internship  
Single subject cross-cultural language and academic development (CLAD) emphasis  
Single subject bilingual cross-cultural language and academic development (BCLAD) emphasis: Spanish

### **Specialist Credentials**

BCLAD  
Education specialist for the deaf and hard of hearing, levels I and II  
Reading/language arts  
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

### **Service Credentials**

Administrative; internship  
Child welfare and attendance  
Pupil personnel:  
School counseling  
School nurse  
School psychology; internship  
School social work  
Speech Language Pathology

## 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 speech language pathology  
Certificate in biomedical quality systems  
Certificate in cognitive disabilities  
Certificate in communications systems  
Certificate in community college teaching  
Certificate in developing gifted potential  
Certificate in distance education  
Certificate in dual language biliteracy  
Certificate in early childhood-socio-emotional and behavior regulation intervention specialist  
Certificate in early childhood special education authorization  
Certificate in educational facility planning  
Certificate in executive financial planner  
Certificate in institutional research, planning, and assessment  
Certificate in instructional design  
Certificate in instructional technology  
Certificate in mathematics specialist  
Certificate in museum studies

Certificate in nursing education  
Certificate in preventive medicine residency  
Certificate in primary grade writing instruction  
Certificate in professional computational science  
Certificate in psychiatric rehabilitation  
Certificate in reading  
Certificate in regulatory affairs  
Certificate in rehabilitation administration  
Certificate in rehabilitation counseling  
Certificate in rehabilitation technology  
Certificate in social work administration  
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 web and mobile applications development  
Certificate in women's studies  
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.



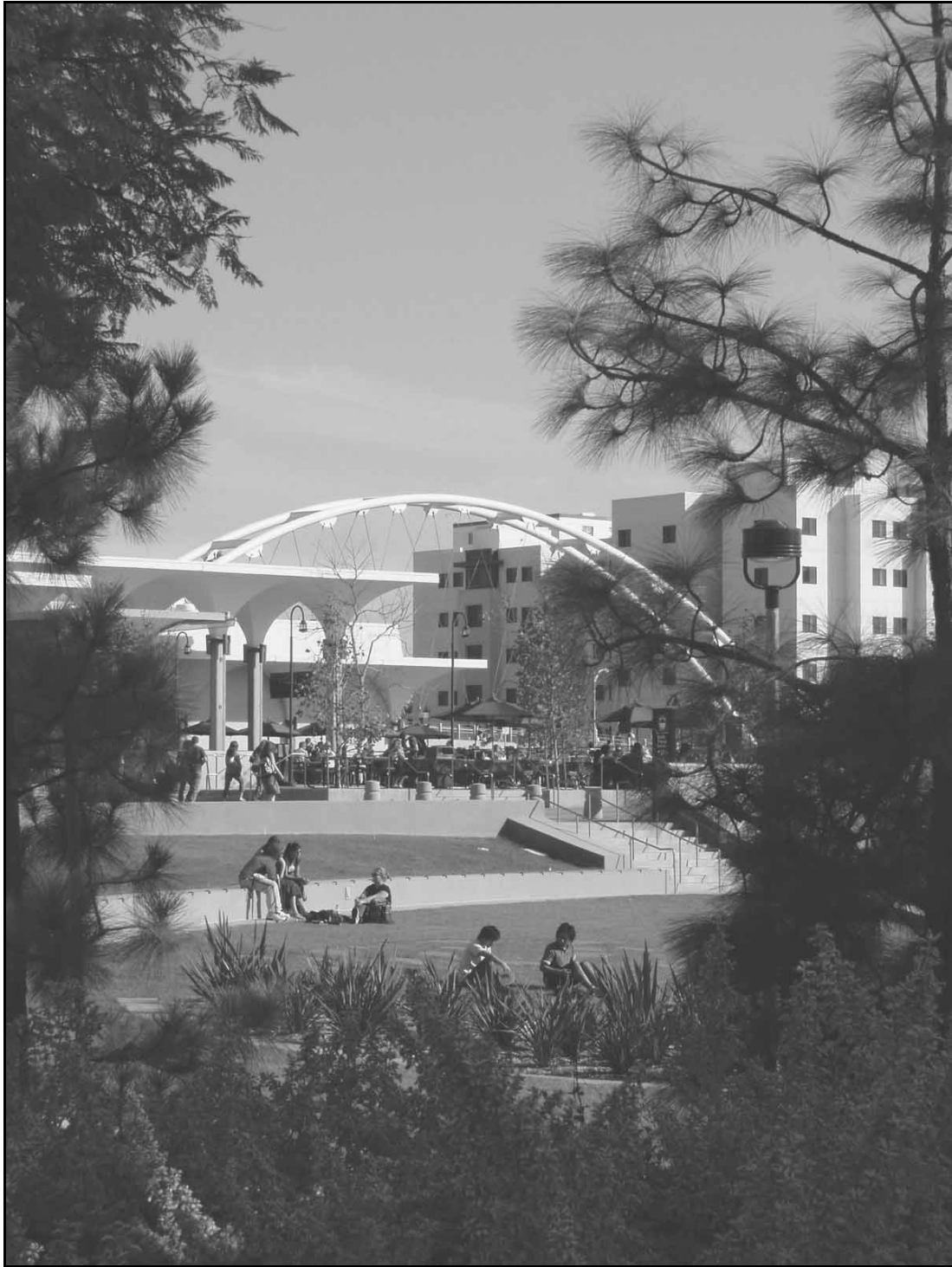
**Types of Degrees Offered by Major**

Majors	Graduate Curricula		
	M.A., M.F.A.	M.S., Ed.S., M.A.T.	Au.D., Ph.D., Ed.D.
Accountancy .....	-	M.S.	-
Accounting .....	-	-	-
Aerospace engineering .....	-	M.S.	-
Africana studies .....	-	-	-
American Indian studies .....	-	-	-
Anthropology .....	M.A.	-	-
Applied mathematics .....	-	M.S.	-
Art .....	M.A., M.F.A.	-	-
Asian studies .....	M.A.	-	-
Astronomy .....	-	M.S.	-
Audiology .....	-	-	Au.D.
Bioengineering .....	-	M.S.	Ph.D.
Bioinformatics and medical informatics .....	-	M.S.	-
Biology .....	M.A.	M.S.	Ph.D.
Biomedical quality systems .....	-	M.S.	-
Business administration .....	M.B.A.	M.S.	-
Business administration and juris doctor .....	M.B.A./J.D.	-	-
Business administration/Latin American studies .....	M.B.A./M.A.	-	-
Chemical physics .....	-	-	-
Chemistry .....	M.A.	M.S.	Ph.D.
Chicana and Chicano studies .....	M.A.	-	-
Child development .....	-	M.S.	-
City planning .....	-	M.C.P.	-
Civil engineering .....	-	M.S.	-
Classics .....	-	-	-
Clinical psychology .....	-	-	Ph.D.
Communication .....	M.A.	-	-
Comparative literature .....	-	-	-
Computational science .....	-	M.S.	Ph.D.
Computer engineering .....	-	-	-
Computer science .....	-	M.S.	-
Construction engineering .....	-	-	-
Counseling .....	-	M.S.	-
Creative writing .....	M.F.A.	-	-
Criminal justice .....	-	-	-
Criminal justice and criminology .....	-	M.S.	-
Dance .....	-	-	-
Ecology .....	-	-	Ph.D.
Economics .....	M.A.	-	-
Education .....	M.A.	M.A.T.	Ph.D.
Educational leadership .....	-	-	Ed.D.
Educational technology .....	-	-	Ed.D.
School psychology .....	-	Ed.S.	-
Teaching and learning .....	-	-	Ed.D.
Electrical and computer engineering .....	-	-	Ph.D.
Electrical engineering .....	-	M.S.	-
Engineering .....	-	M.Eng.	Ph.D.
English .....	M.A.	-	-
Environmental engineering .....	-	-	-
Environmental sciences .....	-	-	-
European studies .....	-	-	-
Evolutionary biology .....	-	-	Ph.D.
Exercise physiology .....	-	M.S.	-
Exercise physiology and nutritional science .....	-	M.S./M.S.	-
Finance .....	-	-	-
Financial services .....	-	-	-
Foods and nutrition .....	-	-	-
French .....	M.A.	-	-
Geography .....	M.A.	M.S.	Ph.D.
Geological sciences .....	-	M.S.	-
Geophysics .....	-	-	Ph.D.
German .....	-	-	-
Gerontology .....	-	M.S.	-
Health science .....	-	-	-
History .....	M.A.	-	-



Types of Degrees Offered by Major – *continued*

Majors	Graduate Curricula		
	M.A., M.F.A.	M.S., Ed.S.	Au.D., Ph.D., Ed.D.
Homeland security .....	-	M.S.	-
Hospitality and tourism management .....	-	-	-
Humanities .....	-	-	-
Information systems .....	-	-	-
Interdisciplinary studies .....	M.A.	M.S.	-
International business .....	-	-	-
International security and conflict resolution.....	-	-	-
Japanese.....	-	-	-
Journalism .....	-	-	-
Juris doctor and business administration .....	M.B.A./J.D.	-	-
Juris doctor and social work .....	-	M.S.W./J.D.	-
Kinesiology.....	M.A.	-	-
Language and communicative disorders .....	-	-	Ph.D.
Latin American studies.....	M.A.	-	-
Latin American studies/business administration .....	M.A./M.B.A.	-	-
Latin American studies/public administration ..	M.A./M.P.A.	-	-
Latin American studies and public health.....	M.A./M.P.H.	-	-
Liberal arts and sciences.....	M.A.	-	-
Liberal studies.....	-	-	-
Linguistics .....	M.A.	-	-
Management .....	-	-	-
Marketing .....	-	-	-
Mathematics .....	M.A.	-	-
Mathematics and science education .....	-	-	Ph.D.
Mechanical engineering.....	-	M.S.	-
Mechanical and aerospace engineering .....	-	-	Ph.D.
Microbiology.....	-	M.S.	-
Modern Jewish studies .....	-	-	-
Music.....	M.A.	M.M.	-
Nursing.....	-	M.S.	-
Nutritional sciences.....	-	M.S.	-
Nutritional science and exercise physiology....	-	M.S./M.S.	-
Philosophy.....	M.A.	-	-
Physical science .....	-	-	-
Physics .....	M.A.	M.S.	-
Political science .....	M.A.	-	-
Psychology.....	M.A.	M.S.	Ph.D.
Public administration.....	M.P.A.	-	-
Public administration/Latin American studies ..	M.P.A./M.A.	-	-
Public health.....	-	M.P.H., M.S.	Ph.D.
Public health and Latin American studies.....	-	M.P.H./M.A.	-
Public health and social work .....	-	M.S.W./M.P.H.	-
Radiological health physics .....	-	M.S.	-
Real estate .....	-	-	-
Recreation administration.....	-	-	-
Regulatory affairs .....	-	M.S.	-
Rehabilitation counseling .....	-	M.S.	-
Religious studies .....	-	-	-
Rhetoric and writing studies.....	M.A.	-	-
Russian.....	-	-	-
Russian and Central European studies.....	-	-	-
Social science .....	-	-	-
Social work .....	-	M.S.W.	-
Social work and juris doctor.....	-	M.S.W./J.D.	-
Social work and public health .....	-	M.S.W./M.P.H.	-
Sociology.....	M.A.	-	-
Spanish .....	M.A.	-	-
Speech, language, and hearing sciences .....	M.A.	-	-
Statistics .....	-	M.S.	-
Structural engineering.....	-	-	Ph.D.
Television, film and new media production .....	M.A.	-	-
Theatre arts .....	M.A., M.F.A.	-	-
Urban studies .....	-	-	-
Women's studies .....	M.A.	-	-



# Major and Credential Codes\*

## MAJOR CODE KEY:

- U = Undergraduate  
 G = Graduate  
 + = Emphasis within another bachelor's degree  
 ¢ = Concentration within another master's or Ph.D. degree  
 # = Specialization within another bachelor's degree

MAJOR	MAJOR CODE
Accountancy	05021 G
+ Accounting	05021 U
Africana Studies	22111 U
American Indian Studies	22121 U
Anthropology	22021 U & G
Applied Mathematics	17031 G
Art	10021 U & G
+ ¢ Art History	10031 U & G
+ Graphic Design	10091 U
+ Interior Design	02031 U
+ Multimedia	06991 U
Art - MFA	10022 G
Asian Studies	03011 U & G
+ Chinese Studies and Language	03011 U
Astronomy	19111 U & G
Audiology	12202 G
Bioinformatics and Medical Informatics	07994 G
Biology	04011 U & G
Biomedical Quality Systems	09994 G
Business Administration	05011 G
¢ Life Sciences	05016 G
Business Administration and Juris Doctor (concurrent program)	05995 G
Business Administration and Latin American Studies (concurrent program)	49061 G
+ Chemical Physics	19081 U
Chemistry	19051 U & G
+ Biochemistry	19051 U
Chicana and Chicano Studies	22131 U & G
Child Development	08231 U & G
City Planning	02061 G
Classics	15041 U
Clinical Psychology	20031 G
Communication	06011 U & G
General Communication	15061 U
+ Advertising	06041 U
# Media Studies	15060 U
+ Public Relations	05992 U
+ Telecommunications and Film	06033 U
Comparative Literature	15031 U
Computational Science	07992 G
Computer Science	07011 U & G
Counseling	08261 G
Creative Writing	15071 G
Criminal Justice	21051 U
¢ Criminal Justice Administration	21051 G
Criminal Justice and Criminology	22091 G
Dance	10081 U
Dance - BFA	10082 U
¢ Ecology	04201 G
Economics	22041 U & G
+ International Economics	22042 U
Education (Ed.D.)	08291 G
School Psychology (Ed.S.)	20013 G
Education (MAT)	08292 G
Education	08011 G

MAJOR	MAJOR CODE
¢ Counseling	08261 G
¢ Educational Leadership	08271 G
¢ EDL: PreK-12 School Leadership	08272 G
¢ EDL: Community College/Post-secondary Leadership	08273 G
¢ Educational Research	08241 G
¢ Educational Technology	08992 G
¢ Elementary Curriculum and Instruction	08021 G
¢ Mathematics Education K-8	17012 G
¢ Policy Studies in Language and Cross-Cultural Education	08994 G
¢ Reading Education	08301 G
¢ Secondary Curriculum and Instruction	08031 G
¢ Special Education	08081 G
Engineering	09134 G
Aerospace Engineering	09021 U & G
Bioengineering	09051 G
Civil Engineering	09081 U & G
Computer Engineering	09094 U
Construction Engineering	09254 U
Electrical and Computer Engineering	09095 G
Electrical Engineering	09091 U & G
Mechanical and Aerospace/Engineering	19020 G
¢ Environmental Engineering	09221 U & G
Mechanical Engineering	09101 U & G
Structural Engineering	09084 G
English	15011 U & G
¢ Entrepreneurship	05997 G
Environmental Sciences	49011 U
European Studies	03101 U
Evolutionary Biology	04016 G
Exercise Physiology	08355 G
Exercise Physiology and Nutritional Science (concurrent program)	08356 G
+ ¢ Finance	05041 U & G
+ Financial Services	05043 U
+ ¢ Financial and Tax Planning	05043 G
Foods and Nutrition	13061 U
French	11021 U & G
Geography	22061 U & G
Geological Sciences	19141 U & G
Geophysics	19160 G
German	11031 U
Gerontology	21043 U & G
Health Communication	06013 U
Health Science	12011 U
Homeland Security	22102 G
History	22051 U & G
Hospitality and Tourism Management	05081 U
Humanities	15991 U
¢ Human Resource Management	05151 G
+ ¢ Information Systems	07021 U & G
Interdisciplinary Studies	49993 U & G
¢ International Business	05131 U & G
International Security and Conflict Resolution	22103 U
Japanese	11081 U
Journalism	06021 U
Juris Doctor and Social Work (concurrent program)	21045 G
Kinesiology	08351 U & G
Language and Communicative Disorders	12201 G

MAJOR	MAJOR CODE
Latin American Studies	03081 U & G
Latin American Studies and Business Administration (concurrent program)	49061 G
Latin American Studies and Public Administration (concurrent program)	21020 G
Liberal Arts and Sciences	49017 G
Liberal Studies	49015 U
Linguistics	15051 U & G
+ ¢ Management	05061 U & G
+ ¢ Marketing	05091 U & G
Mathematics-B.A. degree	17011 U & G
Mathematics-B.S. degree	17031 U
Mathematics and Science Education	08997 G
Microbiology	04111 U & G
Modern Jewish Studies	15102 U
¢ Molecular Biology	04161 G
Music	10041 U & G
Music	10051 G
Music	10052 U
Nursing	12031 U
Nursing	12032 U & G
Nutritional Sciences	13061 G
Nutritional Science and Exercise Physiology	08356 G
¢ Operations Management	05064 G
Philosophy	15091 U & G
Physical Science	19011 U
Physics	19021 U & G
¢ Physiology	04101 G
Political Science	22071 U & G
Psychology	20011 U & G
Public Administration	21021 U & G
Public Administration and Latin American Studies (concurrent program)	21020 G
Public Health	12141 G
¢ Health Behavior	12143 G
Public Health and Social Work (concurrent program)	12991 G
Radiological Health Physics	12251 G
+ ¢ Real Estate	05111 U & G
Recreation Administration	21031 U
Regulatory Affairs	49045 G
Rehabilitation Counseling	12221 G
Religious Studies	15101 U
Rhetoric and Writing Studies	15013 G
Russian	11061 U
Russian and Central European Studies	03071 U
Social Science	22011 U
Social Work	21041 U & G
Social Work and Juris Doctor (concurrent program)	21045 G
Social Work and Public Health (concurrent program)	12991 G
Sociology	22081 U & G
Spanish	11051 U & G
Speech, Language, and Hearing Sciences	12201 U & G
Statistics	17021 U & G
¢ Systematics and Evolutionary Biology (Zoology)	04071 G
¢ Taxation	05022 G
Television, Film and New Media Production	06031 U & G
Theatre Arts	10071 U & G
Theatre Arts - MFA	10072 G
Undeclared	00000 U
Urban Studies	22141 U
Vocational Education	08395 U
Watershed Science	49052 U
Women's Studies	49991 U & G

\* See following page for NUMERICAL LISTING OF MAJOR CODES and CREDENTIAL CODES.

## Major and Credential Codes

### NUMERICAL LISTING OF MAJOR CODES

MAJOR CODE	MAJOR	MAJOR CODE	MAJOR	MAJOR CODE	MAJOR
0000 U	Undeclared	08997 G	Mathematics and Science Education	20013 G	School Psychology (Ed.S.)
02031 U	+ Interior Design			20031 G	Clinical Psychology
02061 G	ϕ City Planning	09021 U & G	Aerospace Engineering	21020 G	Public Administration and Latin American Studies (concurrent program)
03011 U & G	Asian Studies	09051 G	Bioengineering		
03011 U	+ Chinese Studies and Language	09081 U & G	Civil Engineering	21021 U & G	Public Administration
03071 U	Russian and East European Studies	09084 G	Structural Engineering	21031 U	Recreation Administration
03081 U & G	Latin American Studies	09091 U & G	Electrical Engineering	21041 U & G	Social Work
03101 U	European Studies	09094 U	Computer Engineering	21043 U & G	Gerontology
04011 U & G	Biology	09095 G	Electrical and Computer Engineering	21045 G	Social Work and Juris Doctor (concurrent program)
04016 G	Evolutionary Biology	09101 U & G	Mechanical Engineering		
04071 G	ϕ Systematics Evolutionary Biology (Zoology)	09134 G	Engineering	21051 U	Criminal Justice
04101 G	ϕ Physiology	09221 U & G	ϕ Environmental Engineering	21051 G	ϕ Criminal Justice Administration
04111 U & G	ϕ Microbiology	09254 U	Construction Engineering		
04161 G	ϕ Molecular Biology	09994 G	Biomedical Quality Systems	22011 U	Social Science
04201 G	ϕ Ecology	10021 U & G	Art	22021 U & G	Anthropology
05011 U & G	Business Administration	10022 G	Art - MFA	22041 U & G	Economics
05016 G	ϕ Life Sciences	10031 U & G	+ ϕ Art History	22042 U	+ International Economics
05021 G	Accountancy	10041 U & G	Music	22051 U & G	History
05021 U	+ Accounting	10051 G	Music	22061 U & G	Geography
05022 G	ϕ Taxation	10052 U	Music	22071 U & G	Political Science
05041 U & G	+ ϕ Finance	10071 U & G	Theatre Arts	22081 U & G	Sociology
05043 U	+ Financial Services	10072 G	Theatre Arts - MFA	22091 G	Criminal Justice and Criminology
05043 G	ϕ Financial and Tax Planning	10081 U	Dance	22102 G	Homeland Security
05061 U & G	+ ϕ Management	10082 U	Dance - BFA	22103 U	International Security and Conflict Resolution
05064 G	ϕ Operations Management	10091 U	+ Graphic Design		
05081 U	Hospitality and Tourism Management	11021 U & G	French	22111 U	Africana Studies
05091 U & G	+ ϕ Marketing	11031 U	German	22121 U	American Indian Studies
05111 U & G	+ ϕ Real Estate	11051 U & G	Spanish	22131 U & G	Chicana and Chicano Studies
05131 U & G	ϕ International Business	11061 U	Russian		
05151 G	ϕ Human Resource Management	11081 U	Japanese	22141 U	Urban Studies
05992 U	+ Public Relations	12011 U	Health Science	49011 U	Environmental Sciences
05995 G	Business Administration and Juris Doctor (concurrent program)	12031 U & G	Nursing	49015 U	Liberal Studies
05997 G	ϕ Entrepreneurship	12032 U	Nursing	49017 G	Liberal Arts and Sciences
06011 U & G	Communication	12141 G	Public Health	49045 G	Regulatory Affairs
06021 U	Journalism	12143 G	ϕ Health Behavior	49052 U	+ Watershed Science
06031 U & G	Television, Film and New Media Production	12201 U & G	Speech, Language, and Hearing Sciences	49061 G	Business Administration and Latin American Studies (concurrent program)
06033 U	+ Telecommunications and Film	12201 G	Language and Communicative Disorders		
06041 U	+ Advertising	12202 G	Audiology	49991 U & G	Women's Studies
06991 U	+ Multimedia	12221 G	Rehabilitation Counseling	49993 U & G	Interdisciplinary Studies
07011 U & G	Computer Science	12251 G	Radiological Health Physics		
07021 U & G	+ ϕ Information Systems	12991 G	Social Work and Public Health (concurrent program)		
07992 G	Computational Science	13061 U	Foods and Nutrition		
07994 G	Bioinformatics and Medical Informatics	13061 G	Nutritional Sciences		
08011 G	Education	15011 U & G	English		
08021 G	ϕ Elementary Curriculum & Instruction	15013 G	Rhetoric and Writing Studies		
08031 G	ϕ Secondary Curriculum & Instruction	15031 U	Comparative Literature		
08081 G	ϕ Special Education	15041 U	Classics		
08231 U & G	Child Development	15051 U & G	Linguistics		
08241 G	ϕ Educational Research	15060 U	# Media Studies		
08261 G	Counseling	15061 U	General Communication		
08271 G	ϕ Educational Leadership	15071 G	Creative Writing		
08272 G	ϕ EDL: PreK-12 School Leadership	15091 U & G	Philosophy		
08273 G	ϕ EDL: Community College/Postsecondary Leadership	15101 U	Religious Studies		
08291 G	Education (Ed.D.)	15102 U	Modern Jewish Studies		
08292 G	Education (MAT)	15991 U	Humanities		
08301 G	ϕ Reading Education	17011 U & G	Mathematics-B.A. degree		
08351 U & G	Kinesiology	17012 G	ϕ Mathematics Education K-8		
08355 G	Exercise Physiology	17021 U & G	Statistics		
08356 G	Nutritional Science and Exercise Physiology	17031 G	Applied Mathematics		
08395 U	Vocational Education	17031 U	Mathematics-B.S. degree		
08992 G	ϕ Educational Technology	19011 U	Physical Science		
08994 G	ϕ Policy Studies in Language and Cross-Cultural Education	19020 G	Mechanical and Aerospace Engineering		
		19021 U & G	Physics		
		19051 U & G	Chemistry		
		19051 U	Biochemistry		
		19081 U	Chemical Physics		
		19111 U & G	Astronomy		
		19141 U & G	Geological Sciences		
		19160 G	Geophysics		
		20011 U & G	Psychology		
				20013 G	School Psychology (Ed.S.)
				20031 G	Clinical Psychology
				21020 G	Public Administration and Latin American Studies (concurrent program)
				21021 U & G	Public Administration
				21031 U	Recreation Administration
				21041 U & G	Social Work
				21043 U & G	Gerontology
				21045 G	Social Work and Juris Doctor (concurrent program)
				21051 U	Criminal Justice
				21051 G	ϕ Criminal Justice Administration
				22011 U	Social Science
				22021 U & G	Anthropology
				22041 U & G	Economics
				22042 U	+ International Economics
				22051 U & G	History
				22061 U & G	Geography
				22071 U & G	Political Science
				22081 U & G	Sociology
				22091 G	Criminal Justice and Criminology
				22102 G	Homeland Security
				22103 U	International Security and Conflict Resolution
				22111 U	Africana Studies
				22121 U	American Indian Studies
				22131 U & G	Chicana and Chicano Studies
				22141 U	Urban Studies
				49011 U	Environmental Sciences
				49015 U	Liberal Studies
				49017 G	Liberal Arts and Sciences
				49045 G	Regulatory Affairs
				49052 U	+ Watershed Science
				49061 G	Business Administration and Latin American Studies (concurrent program)
				49991 U & G	Women's Studies
				49993 U & G	Interdisciplinary Studies

### CODES FOR CREDENTIALS

#### CREDENTIAL CODE

Single Subject Instruction	00100
Multiple Subject Instruction	00200
Reading/Language Arts Specialist	00410
BCLAD Specialist	00440
Special Education: Early Childhood Special Education	00435
Special Education: Mild/Moderate Disabilities	00468
Special Education: Moderate/Severe Disabilities	00469
Special Education: Physical and Health Impairments	00472
Administrative Services (Preliminary)	00501
Administrative Services (Professional Clear)	00502
School Nurse Services	00600
Pupil Personnel Services	
School Counseling	00802
Child Welfare and Attendance or	00801
School Social Work	00803
School Psychology	00804
Speech Language Pathology	00900
Language, Speech, Hearing, and Audiology	00902
Audiology	00903
Language, Speech, and Hearing including Special Class Authorization	00910
Language, Speech, and Hearing adding Special Class Authorization	00911

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# Course Information

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 Four 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 seven class days of the semester. Students who do not meet prerequisite requirements can also be dropped within the first seven 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 by 6 p.m. on the 12th class day of the semester.

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 schedule adjustment period.

### 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

The schedule adjustment period allows you to drop a course, add a course, withdraw from the university, and change the grading basis of a course. The deadline to DROP a class is at 11:59 p.m. on the 10th day of the term. The deadline to ADD a class, change grading basis or withdraw from the university is at 11:59 p.m. on the 12th day of the term. You are not allowed to make any schedule adjustments after these deadlines and are responsible for knowing the current semester dates for these deadlines, which can be found on the academic calendar and the Class Schedule registration notice.

## The Unit or Credit Hour

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

## Prerequisites for 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 Topics Courses 596 and 696

No more than 12 units of coursework numbered 596 and/or 696 may be applied to a graduate degree or advanced certificate program. Special topics courses may also not constitute more than half the units toward a degree or certificate program.

## 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.

## Online and Hybrid Courses

Certain courses may be offered as online (distance education) or hybrid (combination online and in-person). The online and hybrid courses offered each term can be found in the *Class Schedule*.

## 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.

## Course Information

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### 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 60654  
312-755-7498

**American Association of Colleges for Teacher Education**

1307 New York Ave, NW  
Washington, D.C. 20005  
202-293-2450, <http://www.aacte.org>

**American Chemical Society**

Committee on Professional Training  
1155 Sixteenth Street, N.W.  
Washington, D.C. 20036  
202-872-4600, <http://www.acs.org>

**American College of Nurse Midwives Accreditation  
Commission for Midwifery Education**

8403 Colesville Road, Suite 1550  
Silver Spring, MD 20910-6374  
240-485-1802, <http://www.midwife.org>

**American Psychological Association (Clinical Psychology)**

750 First Street, N.E.  
Washington, D.C. 20002-4242  
202-336-5500, <http://www.apa.org>

**Council on Academic Accreditation in Audiology  
and Speech-Language Pathology**

2200 Research Boulevard  
Rockville, MD 20850-3289  
301-296-5700, <http://www.asha.org>

**California Commission on Teacher Credentialing**

1900 Capitol Avenue  
Sacramento, CA 95811  
888-921-2682, <http://www.ctc.ca.gov>

**Commission on Accreditation of Healthcare  
Management Education**

2000 14th Street North, Suite 780  
Arlington, VA 22201  
703-894-0960, <http://www.cahme.org>

**Commission on Collegiate Nursing Education**

One Dupont Circle, NW, Suite 530  
Washington, D.C. 20036-1120  
202-887-6791, <http://www.aacn.nche.edu>

**Council for Interior Design Accreditation**

146 Monroe Center NW, #1318  
Grand Rapids, MI 49503-2822  
616-458-0400, <http://www.accredit-id.org/>

**Council of Graduate Schools**

One Dupont Circle, N.W., Suite 430  
Washington, D.C. 20036-1173  
202-223-3791, <http://www.cgsnet.org>

**Council on Education for Public Health**

1015 Fifteenth Street, N.V.  
Washington, D.C. 20005  
202-789-1050, <http://www.ceph.org>

**Council on Social Work Education**

1725 Duke Street, Suite 500  
Alexandria, VA 22314-3457  
703-683-8080, <http://www.cswe.org>

**National Association of School Psychologists**

4340 East West Highway, Suite 402  
Bethesda, MD 20814  
301-657-0280, <http://www.ceph.org>

**National Association of Schools of Art and Design**

11250 Roger Bacon Drive, Suite 21  
Reston, VA 20190  
703-437-0700, <http://www.ceph.org>

**National Association of Schools of Public Affairs  
and Administration**

1120 G Street, N.W., Suite 730  
Washington, D.C. 20005-3801  
202-628-8965, <http://www.ceph.org>

**National Association of Schools of Theatre**

11250 Roger Bacon Drive, Suite 21  
Reston, VA 20190-5248  
703-437-0700, <http://www.ceph.org>

**National Council on Rehabilitation Education**

c/o Charles Arokiasamy, Chief Operating Officer  
California State University, Fresno  
5005 N. Maple Ave, M/S ED 3  
Fresno, CA 93740  
559-906-0787, <http://www.rehabeducators.org>

**National Recreation and Park Association**

22377 Belmont Ridge Road  
Ashburn, VA 20148  
703-858-0784, <http://www.nrpa.org>

**Western Association of Graduate Schools**

University of Washington, The Graduate School  
Box 351240  
Seattle, WA 98195-1240  
206-543-9054, <http://www.wagsonline.org>

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 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, construction engineering, electrical engineering, environmental engineering and mechanical engineering are accredited by the Engineering Accreditation Commission (EAC) of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, 410-347-7700.

The School of Journalism and Media Studies programs in advertising, journalism, and public relations are accredited by the Accrediting Council on Education in Journalism and Mass Communication, Stauffer-Flint Hall, 1435 Jayhawk Boulevard, Lawrence, KS 66045-7575, 785-864-3973, <http://www2.ku.edu/~acejmc/index.html>.

The School of Nursing is accredited by the California Board of Registered Nursing, State of California, Department of Consumer Affairs, 400 R Street., Suite 4030, Sacramento, CA 95814, 916-322-3350.

Concentrations in Environmental Health and Occupational Health, in the Graduate School of Public Health are accredited by the American Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202, 410-347-7700.

The 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, <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, <http://www.eatright.org/default.aspx>.

## Course Abbreviations

ACCTG.....	Accountancy	HTM.....	Hospitality and Tourism Management
ARP.....	Administration, Rehabilitation and Post Secondary Education	HUM.....	Humanities
A E.....	Aerospace Engineering	INT S.....	Interdisciplinary Studies
A S.....	Aerospace Studies	I B.....	International Business
AFRAS.....	Africana Studies	ISCOR.....	International Security and Conflict Resolution
AMIND.....	American Indian Studies	ITAL.....	Italian
ANTH.....	Anthropology	JAPAN.....	Japanese
ARAB.....	Arabic	JS.....	Jewish Studies
ART.....	Art	JMS.....	Journalism and Media Studies
ASIAN.....	Asian Studies	KOR.....	Korean
ASTR.....	Astronomy	LATAM.....	Latin American Studies
AUD.....	Audiology	LGBT.....	Lesbian, Gay, Bisexual, and Transgender Studies
BIOMI.....	Bioinformatics and Medical Informatics	LIB S.....	Liberal Studies
BIOL.....	Biology	LING.....	Linguistics
BQS.....	Biomedical Quality Systems	MGT.....	Management
B A.....	Business Administration	MIS.....	Management Information Systems
CHEM.....	Chemistry	MKTG.....	Marketing
CCS.....	Chicana and Chicano Studies	MALAS.....	Master of Liberal Arts and Sciences
CFD.....	Child and Family Development	MATH.....	Mathematics
CHIN.....	Chinese	M S E.....	Mathematics and Science Education
C P.....	City Planning	MTHED.....	Mathematics Education
CIV E.....	Civil Engineering	M E.....	Mechanical Engineering
CLASS.....	Classics	MIL S.....	Military Science
COMM.....	Communication	M BIO.....	Molecular Biology
C LT.....	Comparative Literature	MUSIC.....	Music
COMP.....	Computational Science	N SCI.....	Natural Science
COMPE.....	Computer Engineering	NAV S.....	Naval Science
CS.....	Computer Science	NURS.....	Nursing
CON E.....	Construction Engineering	NUTR.....	Nutrition
CSP.....	Counseling and School Psychology	OCEAN.....	Oceanography
CJ.....	Criminal Justice	PERS.....	Persian
DANCE.....	Dance	PHIL.....	Philosophy
ECON.....	Economics	PHYS.....	Physics
ED.....	Education	PLC.....	Policy Studies in Language and Cross-Cultural Education
EDL.....	Educational Leadership	POL S.....	Political Science
EDTEC.....	Educational Technology	PORT.....	Portuguese
E E.....	Electrical Engineering	PSFA.....	Professional Studies and Fine Arts
ENGR.....	Engineering	PSY.....	Psychology
E M.....	Engineering Mechanics	P A.....	Public Administration
ENGL.....	English	P H.....	Public Health
ENV E.....	Environmental Engineering	RTM.....	Recreation and Tourism Management
ENV S.....	Environmental Science	R A.....	Regulatory Affairs
EUROP.....	European Studies	REL S.....	Religious Studies
ENS.....	Exercise and Nutritional Sciences	RWS.....	Rhetoric and Writing Studies
FILIP.....	Filipino	RUSSN.....	Russian
FIN.....	Finance	SCI.....	Science
FRENC.....	French	SWORK.....	Social Work
GMS.....	General Mathematics Studies	SOC.....	Sociology
GEN S.....	General Studies	SPAN.....	Spanish
GEOG.....	Geography	SPED.....	Special Education
GEO.....	Geological Sciences	SLHS.....	Speech, Language, and Hearing Sciences
GERMN.....	German	STAT.....	Statistics
GERO.....	Gerontology	TE.....	Teacher Education
HHS.....	Health and Human Services	TFM.....	Television, Film and New Media
HEBRW.....	Hebrew	THEA.....	Theatre
HIST.....	History	VIET.....	Vietnamese
H SEC.....	Homeland Security	WMNST.....	Women's Studies
HONOR.....	Honors Program		

### Accountancy

Refer to "Business Administration" in this section of the bulletin.

### Administration Rehabilitation and Postsecondary Education

Refer to "Education" in this section of the bulletin.

### Aerospace Engineering and Engineering Mechanics

Refer to "Engineering" in this section of the bulletin.





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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://anthropology.sdsu.edu>**

## Faculty

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

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

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

Matthew T. Lauer, Ph.D., Associate Professor of Anthropology  
(Graduate Adviser)

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

Ramona L. Pérez, Ph.D., Associate Professor of Anthropology

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

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

## Associateships

The department offers two competitive, internal scholarship programs, the Norton Allen Scholarship and the Al Sonek Biological Anthropology Scholarship. The department also hires a small number of graduate students for a variety of technical assistant positions, teaching assistant positions, and readers (ISAs). Application and additional information can be found on the department Web site.

## General Information

The department 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, world prehistory, and environmental anthropology. Additional facilities available in the community include the Museum of Man, the San Diego Zoo, and various internship sites for applied research.

Students who graduate with the Master of Arts degree in anthropology in either the general or applied anthropology specialization will be prepared for a variety of opportunities, including teaching careers.

## 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 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) English language 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) A completed anthropology department application available at [http://anthropology.sdsu.edu/docs/Anthro\\_application.pdf](http://anthropology.sdsu.edu/docs/Anthro_application.pdf);

(2) A statement of purpose which should demonstrate a clear focus of research interests, to include both geographical and topical specialties. Must also include the names of at least two SDSU anthropology faculty who would be suitable thesis advisers (please use a separate sheet of paper for the statement of purpose);

(3) One copy of transcripts from all colleges and universities attended (these do not need to be sent directly from the colleges or universities; unofficial photocopies are acceptable);

(4) A copy of GRE scores. Photocopies or printouts from the ETS Web site are acceptable;

(5) An optional application for Graduate Assistant or Instructional Student Assistant positions available at [http://anthropology.sdsu.edu/docs/Employment\\_App.pdf](http://anthropology.sdsu.edu/docs/Employment_App.pdf);

(6) Three letters of recommendation from persons in a position to judge your academic ability. Letters may be e-mailed to Kathy Peck, Administrative Coordinator ([kpeck@mail.sdsu.edu](mailto:kpeck@mail.sdsu.edu)) or mailed directly to department. If paper copies are sent, we prefer that letters be sent to the applicant and included with other application materials. If your recommenders prefer to send letters directly to department, this is acceptable (though not preferred). In either case, letters should be received in sealed envelopes with recommender's signature on back flap.

(7) A example of written work representative of your research and writing skills.

## Admission to the Degree Curriculum

Admission application deadline is March 1. All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Four of this bulletin. Except under special circumstances, prospective applicants must meet the following minimum admission requirements:

(1) Hold an acceptable baccalaureate degree from an accredited institution or equivalent as determined by the Division of Graduate Affairs;

(2) Have attained at least a 3.0 GPA on all work leading to the bachelor's degree and subsequent post-baccalaureate coursework;

- (3) Have been in good standing in the last institution attended; and
- (4) Have a combined verbal and quantitative GRE (Graduate Record Exam) score of at least 950 and a minimum 4.0 on the analytic essay. Meeting the minimum requirements does not guarantee admission. All prospective applicants are reviewed by department faculty and ranked using a variety of criteria.

Applicants who meet the minimum admission requirements but who do not have a strong background in anthropology may be admitted conditionally. Conditionally admitted students will be required to complete specified courses in addition to the minimum 33 units required for the Master of Arts degree.

### Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Four of this bulletin. In addition, the department requires for either the General Anthropology specialization or the Applied Anthropology specialization that the student must:

- (1) Complete all deficiency courses (needed only if admitted with conditional graduate standing);
- (2) Complete all required coursework (except ANTH 799);
- (3) Satisfy the foreign language requirement OR complete a sequence of at least one lower division, and one upper division course in statistics or GIS (with a grade point average of 2.5 or better);
- (4) Maintain at least a 3.0 GPA in all other courses applied to the Master of Arts degree including any transfer credit;
- (5) Form a thesis committee;
- (6) Complete a thesis proposal and had it approved by your committee;
- (7) Obtain human or animal subjects approval (if applicable);
- (8) Submit a signed Appointment to Thesis Committee form to the graduate program adviser.

### Specific Requirements for the Master of Arts Degree

**(Major Code: 22021) (SIMS Code: 110901)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree as described in Part Four of this bulletin, students must complete a graduate program of at least 33 units of graduate courses with a 3.0 GPA that include the required courses listed below for each specialization. No more than three units of Anthropology 798, Special Study, and/or three units of Anthropology 795, Internship, may be used toward satisfaction of the degree. Courses required to remove undergraduate deficiencies and those used to fulfill the language or statistics requirements are in addition to the minimum 33 units required for the Master of Arts degree in anthropology.

#### General Anthropology Specialization

**(SIMS Code: 110940)**

1. Anthropology 601, 602, 603, 604 (with no less than a grade of B). Only classified students may enroll in these courses;
2. One of the following methods courses: Anthropology 502, 505, 506, 507, 520, 531, 560, 561;
3. Anthropology 797 (3) Cr/NC/RP;
4. A minimum of 12 units of coursework numbered 500 or above from any department (with a maximum of nine units outside of the anthropology department) determined in consultation with the student's thesis adviser;
5. Anthropology 799A, Thesis (3) Cr/NC/RP.

#### Applied Anthropology Specialization

**(SIMS Code: 110910)**

1. Nine units selected from Anthropology 601, 602, 603, 604 (with no less than a grade of B). Only classified students may enroll in these courses;
2. Anthropology 605 (with no less than a grade of B);

3. One of the following methods courses: Anthropology 502, 505, 506, 507, 520, 531, 560, 561;
4. Anthropology 795, Internship in Anthropology (3-9) Cr/NC. Only classified students may enroll;
5. Anthropology 797, Research (3) Cr/NC/RP;
6. A minimum of nine units of coursework numbered 500 or above from any department determined in consultation with the student's thesis adviser;
7. Anthropology 799A, Thesis (3) Cr/NC/RP.

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

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

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

#### UPPER DIVISION COURSES

##### ANTH 501. Primate Behavioral Ecology (3)

Prerequisite: Anthropology 301.

Ecology and behavior of nonhuman primates to include history of primate ecological research, feeding ecology, predation, demography and dispersal, reproduction, conflict and cooperation, conservation as well as contemporary primatology.

##### ANTH 502. Observing Primate Behavior (3)

Two lectures and three hours of laboratory.

Prerequisites: Anthropology 301 and Anthropology 355 or 501.

Methods of observation and analysis used in study of primate behavior. Behavioral observations of primates at the San Diego Zoo and review of literature in primatology. (Formerly numbered Anthropology 500.)

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

Two lectures and three hours of laboratory.

Prerequisite: Anthropology 301.

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.

Prerequisite: 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.

Prerequisite: Anthropology 505.

Anthropology within medicolegal context. Methodology used in forensic anthropology.

##### ANTH 508. Medical Anthropology (3)

Prerequisite: Anthropology 303.

Socio-cultural ecology of disease, medical health beliefs and practices in cultural context, and complexities of health care delivery in pluralistic societies.

##### ANTH 510. Environmental and Ecological Anthropology (3)

Prerequisite: Anthropology 303.

Ecological thinking in anthropology with focus on relationships between human environmental and ecological systems in tribal, peasant, and industrial societies. Cultural aspects of how and why human societies have maintained or undermined their ecosystems.

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

Prerequisite: Anthropology 303.

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 523. Anthropology of Politics and Power (3)**

Prerequisite: Anthropology 303.

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 303.

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)**

Prerequisite: Anthropology 303.

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)**

Prerequisite: Anthropology 303.

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 532. Anthropology of Development and Conservation (3)**

Prerequisite: Anthropology 303.

Anthropological perspectives on design, implementation, and assessment of development projects and conservation initiatives in "Third World." Interlinkages between resource exploitation, underdevelopment, and local autonomy; and political and ethical dilemmas faced by anthropologists involved in projects.

**ANTH 533. Race, Ethnicity, and Identity (3)**

Prerequisite: Anthropology 303.

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)**

Prerequisite: Anthropology 303.

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)**

Prerequisite: Anthropology 303.

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 303.

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)**

Prerequisite: Anthropology 303.

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.

Prerequisite: Anthropology 312.

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

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

Two lectures and three hours of laboratory.

Prerequisite: Anthropology 302.

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

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

Prerequisites: At least one of the 300-level courses (Anthropology 301, 302, 303, or 304) and a statistics course.

Computer oriented data analysis class utilizing anthropological data sets.

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

Prerequisite: Consent of instructor.

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

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

Prerequisite: Consent of instructor.

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

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

Prerequisite: Consent of instructor.

Advanced topics in anthropology. May be repeated with new content. 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 Biological Anthropology (3)**

Prerequisite: Classified graduate standing.

History, theory, and current research in biological anthropology. Key literature from core topical areas such as primatology, paleoanthropology, human biology, bioarchaeology, and skeletal biology.

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

Prerequisite: Classified graduate standing.

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

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

Prerequisite: Classified graduate standing.

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

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

Prerequisite: Classified graduate standing.

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)**

Prerequisite: Classified graduate standing.

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.

## Anthropology

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

Prerequisite: Twelve upper division units in anthropology.

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

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

Prerequisites: Classified graduate standing and consent of instructor.

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

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

Prerequisite: Classified graduate standing.

Independent investigation in the general field of the thesis.

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

Prerequisite: Classified graduate standing.

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

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

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

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

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

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

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

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# Art

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

**OFFICE: Art 505**  
**TELEPHONE: 619-594-6511 / 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  
Helen Z. Shirk, M.F.A., Professor of Art, Design,  
and Art History, Emerita  
Susan C. Merritt, M.F.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  
Tina Marie Yapelli, M.A., 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  
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. This program can prepare students for a teaching career.

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) English language 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 Four 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) (SIMS Code: 660503)

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 Four 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 Four 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 Concentration (Major Code: 10021) (SIMS Code: 660589)

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 Concentration (Major Code: 10031) (SIMS Code: 660517)

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.

### Advanced Certificate in Museum Studies

The School of Art, Design, and Art History offers an Advanced Certificate in Museum Studies for students already enrolled in the school who wish to develop expertise in the museum field while pursuing a Master of Arts degree in art history or a Master of Arts degree in art, or for postbaccalaureate students who wish to establish a career in the arts but desire to undertake a shorter schedule of study than required for a Master of Arts degree.

Successful applicants must have completed a bachelor's degree from an accredited institution with a minimum grade point average of 3.0. 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. Courses taken in the certificate program with a grade of B or better may be applied to the Master of Arts degree in art history with the consent of the graduate adviser.

Students in the advanced certificate must complete 15 units to include Art 578, 591, 691, 697, 698.

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

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

#### 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.

##### 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.

**ART 504. Painting III (3)**

Six hours.

Prerequisite: Six units of Art 404.

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

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

Prerequisites: Upper division or graduate standing in art and consent of instructor.

Theory, practice, and philosophy of being an artist. Independent research on current art concepts and issues. Material will encompass the past five years. Field trips.

**ART 511. Printmaking III-Lithography (3)**

Six hours.

Prerequisite: Art 411.

Advanced creative lithography printmaking in color. Emphasis on fine print quality in color process and color technology unique to this medium. Maximum credit six units.

**ART 516. Sculpture III (3)**

Six hours.

Prerequisite: Art 416.

Individual investigations into sculpture ideas, methods, and materials. Individual development in sculpture. Materials may include clay, metal, plastics, paper or wood. Maximum credit six units.

**ART 517. Figurative Sculpture II (3)**

Six hours.

Prerequisites: Art 216 and 217.

Figurative study with emphasis on individual exploration. Maximum credit six units.

**ART 523. Furniture Design and Woodworking III (3)**

Six hours.

Prerequisite: Six units of Art 423.

Advanced individual design: Exploration of materials, process and function. Continued focus on development of personal design statements and specialized techniques. Maximum credit six units.

**ART 524. Digital Fabrication for Art and Design (3)**

Six hours.

Prerequisite: A 300- or 400-level art or design course.

Design, visualization, and fabrication processes utilizing modeling and machining software. Basic techniques in computer-aided design (CAD) and computer-aided manufacturing (CAM). Small-scale production techniques and outsourcing for artists and designers. Maximum credit six units.

**ART 525. Ceramics III (3)**

Six hours.

Prerequisite: Art 425.

Study of ceramic design through creative projects of clay forms. Maximum credit six units.

**ART 526. Clay and Glaze Technology in Ceramic Design (3)**

Six hours.

Prerequisite: Art 425.

Experimentation and application of research concerning the use of ceramic materials and techniques as an integral part of the design process. Maximum credit six units.

**ART 531. Jewelry and Metals IIIA-Jewelry (3)**

Six hours.

Prerequisite: Art 431.

Problems involving fabrication processes already studied in order to increase technical competence while exploring personal design statements; specialized techniques such as photoetching and electroforming. Maximum credit six units.

**ART 532. Jewelry and Metals IIIB-Metalsmithing (3)**

Six hours.

Prerequisite: Art 432.

Advanced problems involving metal processes to increase technical competence while exploring personal design statements. Maximum credit six units.

**ART 535. Fiber Construction II (3)**

Six hours.

Prerequisite: Art 435.

Advanced study in nonloom techniques. Techniques to include: looping, braiding, plaiting, and special fabricating techniques. Experimentation with new man-made fibers and with synthetic commercial dyes. Maximum credit six units.

**ART 536. Fiber Surface Design II (3)**

Six hours.

Prerequisite: Art 436.

Application of design for the textile surface, appropriate for both the individual designer and commercial reproduction. Maximum credit six units.

**ART 540. Advanced Photographic Imagery (3)**

Six hours.

Prerequisites: Art 440, or Art 340 and 407. All courses must be completed with a grade of C (2.0) or better.

Visual communication and expression using photographic media, including photomechanical and digital processes. Maximum credit six units with consent of instructor.

**ART 541. Graphic Design IV (3)**

Six hours.

Prerequisites: Grade of C (2.0) or better in Art 339A, 339B, 339C, and two of the following: Art 441, 442, 450, 454. Computer proficiency required with working knowledge of vector graphics, page layout, digital image editing, web design, and motion graphics 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: Grade of C (2.0) or better in Art 339A, 339B, 339C, 442. Computer proficiency required with working knowledge of vector graphics, page layout, digital image editing, web design, and motion graphics 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.

Prerequisite: Grade of C (2.0) or better in Art 344A, or 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 Art 339A, 339B, 339C, and 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, web design, and motion graphics 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.

**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. Maximum combined credit of 15 units for Art 346, 446, 546.



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

Prerequisite: 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 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.

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

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

**ART 557. Nineteenth Century European Art (3)**

Prerequisite: Art 259.

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

**ART 558. Twentieth Century European Art to 1945 (3)**

Prerequisite: Art 259.

Major developments in the visual arts and art criticism from 1880 to 1945 (Post-Impressionism through Surrealism).

**ART 559. Twentieth Century European and American Art Since 1945 (3)**

Prerequisite: Art 259. Recommended: Art 558.

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

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

Prerequisite: Art 259.

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

**ART 561. Mesoamerican Art: Olmecs to Aztecs (3)**

Prerequisite: 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. Field trips required.

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

Prerequisite: Art 259.

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

**ART 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)**

Prerequisite: Art 258 or 259 or 263.

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

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

Prerequisite: Art 258 or 259 or 263.

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

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

Prerequisite: Art 258 or 259 or 263.

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

**ART 568. Art of Crete, Mycenae, Greece, and Rome (3)**

Prerequisite: Art 258.

Development of painting, sculpture, architecture, and crafts from prehistoric times to the fifth century A.D.

**ART 571A. Modern Art of Latin America (3)**

Prerequisites: Art 258 and 259.

Historical, political, and social contexts of leading artists and artistic movements in Latin America from late-nineteenth to mid-twentieth century. Field trips required.

**ART 571B. Contemporary Art of Latin America (3)**

Prerequisites: Art 258 and 259.

Work created by leading contemporary Latin American artists from 1960 to present. Field trips required. (Formerly numbered Art 571.)

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

Prerequisite: Art 259.

Italian arts, architecture, artists, and patrons from fourteenth century Proto-Renaissance period through fifteenth century revival of classical humanism in city states of Florence, Siena, Bologna, Mantua, and Padua.

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

Prerequisite: Art 259.

High Renaissance in Florence and Rome, followed by disintegration of classical principles and domination of Mannerism in Central and Northern Italy and history of arts of Venice in sixteenth century.

**ART 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)**

Prerequisite: Art 259.

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

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

Prerequisites: Art 258 and 259.

Architecture from primitive times to the present.

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

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

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

**ART 591. Gallery Exhibition Design (3)**

Six hours.

Prerequisite: 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)**

Prerequisite: Twelve units of upper division art history.

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

**ART 596. Advanced Studies in Art and Art History (1-4)**

Prerequisites: Twelve units of art and art history and consent of instructor.

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

Prerequisite: Art 500.

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

### **ART 604. Painting (3)**

Six hours.

Prerequisite: Art 504.

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

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

Two hours for each unit of credit.

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

### **ART 616. Sculpture (3)**

Six hours.

Prerequisite: Art 516.

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

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

Six hours.

Prerequisite: Art 523.

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

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

Two hours for each unit of credit.

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

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

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

Six hours.

Prerequisite: Art 525 or 526.

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

### **ART 631. Jewelry and Metalwork (3)**

Six Hours.

Prerequisite: Art 531 or 532.

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

### **ART 634. Textile Design (3)**

Six Hours.

Prerequisite: 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.

Prerequisite: Art 541.

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

### **ART 642. Typography (3)**

Six hours.

Prerequisite: 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.

Prerequisite: 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)**

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

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

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

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

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

### **ART 691. Curatorial Practice (3)**

Six hours.

Prerequisites: Art 578 and 591.

Practical experience in curatorship to include exhibition design/installation and interpretive materials such as catalog essays, extended object labels, didactic panels, audio guides. Disseminate curatorial content and scholarship in contexts of galleries and museums and their online counterparts.

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

Prerequisite: 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)**

Prerequisite: Consent of instructor.

Intensive study in specific areas of art and art history. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### **ART 697. Seminar in Curatorial Theory (3)**

Prerequisite: Art 578.

Theories of exhibition development, curatorial methodologies and research, exhibition funding; curatorial responsibilities to include loan procedures, condition reports, environmental standards, collections storage; institutional structure of museums. Emphasis on role of curator in the twenty-first century.

### **ART 698. Seminar in Museum Administration (3)**

Prerequisite: Art 578.

Museum administrative practices with emphasis on museum structure, organization, and governance; development and fundraising; collection management and curatorial issues; educational/outreach programming; importance of ethical considerations.

**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.

Prerequisite: Art 616 (six units).

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

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

Prerequisite: Art 558 or 559.

Visual arts and art criticism since 1900.

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

Six hours.

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

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

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

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

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

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

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

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

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

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

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

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

# Asian Studies

In the Center for Asian and Pacific Studies  
In the College of Arts and Letters

**OFFICE: Arts and Letters 473**

**TELEPHONE: 619-594-0931 / FAX: 619-594-0257**

**<http://www.rohan.sdsu.edu/~aps1>**

## Faculty Committee for Asian and Pacific Studies

Marilyn Chin, M.F.A., Professor of English and Comparative Literature

Soonja Choi, Ph.D., Professor of Linguistics

Lei Guang, Ph.D., Professor of Political Science

Yoshiko Higurashi, Ph.D., Professor of Japanese

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

Valerie O. Pang, Ph.D., Professor of Teacher Education

Paul Wong, Ph.D., Professor of Sociology and Dean of the College of Arts and Letters

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Anh N. Hua, Ph.D., Assistant Professor of Women's Studies

Latha Varadarajan, Ph.D., Assistant Professor of Political Science

## General Information

No new students are being admitted to this program. For further information, contact the Center for Asian and 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, Economics, Education, English and Comparative Literature, Geography, History, Linguistics and Asian/Middle Eastern Languages, Philosophy, Political Science, Religious Studies, and Sociology. It is administered by the Center for Asian and 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 Asian and Pacific studies; (b) for those in a specific academic discipline who have regional interest in Asian and Pacific studies and wish to promote more effective understanding of the cultures, societies, peoples, and social forces at work in the Asian and Pacific world; and (c) for those who plan to pursue further graduate study in Asian and 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 Center for Asian and 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 Center for Asian and 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 post-secondary 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) English language score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### Center for Asian and Pacific Studies

The following materials should be mailed or delivered to:

Center for Asian and Pacific Studies  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-6042

- (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 Four 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 Center for Asian and Pacific Studies.

## Specific Requirements for the Master of Arts Degree

(Major Code: 03011) (SIMS Code: 111101)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Four 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 Five 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 Center for Asian and Pacific Studies.

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

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### UPPER DIVISION COURSES

#### 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 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

Prerequisite: Consent of instructor.

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

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

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

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

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

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

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

#### Anthropology Course (ANTH)

ANTH 600. Seminar (3)\*

#### Economics Courses (ECON)

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

ECON 750. Seminar in 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

In the College of Sciences

**OFFICE: Physics 131**

**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

Eric L. Sandquist, Ph.D., Professor of Astronomy

Douglas C. Leonard, Ph.D., Associate Professor of Astronomy

Jerome A. Orosz, Ph.D., Associate Professor of Astronomy  
(Graduate Adviser)

William F. Welsh, Ph.D., Associate 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) English language 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 Four 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) (SIMS Code: 770501)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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.

## Courses Acceptable on Master's Degree Program in Astronomy (ASTR)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### UPPER DIVISION COURSE

#### ASTR 596. Advanced Topics in Astronomy (2-3)

Prerequisite: 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)

Prerequisite: Astronomy 450.

Visual, spectroscopic, and eclipsing binary stars. Review of observational techniques. Methods of orbital analysis with applications emphasizing determination of fundamental stellar properties, such as mass, radius, temperature, and luminosity. Implications for stellar evolution.

#### ASTR 620. Galactic Structure (3)

Prerequisite: Astronomy 450.

Survey of basic observational data for determining structure of Milky Way Galaxy. Includes luminosity functions, stellar distributions, solar motion, stellar populations, kinematics and dynamics of general and peculiar stellar motions.

#### ASTR 630. Stellar Atmospheres and Interiors (3)

Prerequisites: Astronomy 440 and Mathematics 342A.

Gas thermodynamics and equations of state. Production of stellar continuum radiation and spectral lines. Theories of radiative and convective energy transport. Interior structure and evolution of stars.

#### ASTR 640. Accretion Power and Radiation Processes (3)

Prerequisites: Astronomy 450 and Mathematics 342A.

Accretion processes in astrophysics; compact objects, spherical and disc accretion, interacting binary stars and active galactic nuclei. High energy radiation processes: bremsstrahlung, Compton and inverse Compton scattering and synchrotron emission.

#### ASTR 660. Galaxies and Cosmology (3)

Prerequisite: Astronomy 450.

Morphology, photometric, and spectroscopic properties, dynamics, and evolution of normal galaxies. Current interpretations of peculiar galaxies and QSO's. The extragalactic distance scale. Observational cosmology.

#### ASTR 680. Astronomical Techniques (3)

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.

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

Prerequisite: Classified graduate standing.

Research in one of the fields of astronomy. Maximum credit six units applicable to a master's degree.

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

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

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

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

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

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

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

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

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

# Audiology

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

**OFFICE: Speech, Language, and Hearing 221**  
**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)  
Carol L. Mackersie, Ph.D., Professor of Speech, Language, and Hearing Sciences  
Laura Dreisbach Hawe, Ph.D., Associate Professor of Speech, Language, and Hearing Sciences  
Peter Torre, III, Ph.D., Associate 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, Meier, Nguyen, Ryan, Viirre

## Doctoral Program

## General Information

**(Major Code: 12202) (SIMS Code: 550191)**

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 Council on Academic Accreditation in Audiology and Speech-Language Pathology. 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. An Au.D. provides the essential education, technical training, research, and creative experience necessary for professional activity, college-level teaching, and preceptoring.

## 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 additional 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. International students should submit materials by January 6.

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

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

### 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) English language 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 on the Web site;
- (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. Prior to the fourth year externship, each student will complete approximately 700 hours of clinic experience.

**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 two sections of the appropriate doctoral project course depending on the campus in which their committee chair resides.

**Award of the Degree.** The Doctor of Audiology (Au.D.) degree will be awarded jointly by the Regents of the University of California and the Trustees of The California State University in the names of both cooperating institutions.

## Financial Support

Funding for graduate students cannot be guaranteed, although every effort will be made to provide some financial support for as many students as possible, through graduate/teaching assistantships, research grants, clinical traineeships, and/or scholarships. Financial support will be awarded consistent with the policies of the two universities. Tuition and fees will be charged in accordance with the extant policies at the campus in which the student is matriculated in a given year.

## Courses Acceptable on Au.D. Degree Program in the School of Speech, Language, and Hearing Sciences (AUD)

*Refer to Courses and Curriculum and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### GRADUATE COURSES

#### **AUD 696. Selected Topics in Audiology (1-3)**

Prerequisite: Graduate standing.

Intensive study in specific areas of audiology. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

#### **AUD 700. Hearing Science (3)**

Prerequisite: Admission to doctoral program.

Nature of sound and applications to hearing and speech, including acoustics, structure, and function of auditory system, and perception of sound.

#### **AUD 701. Clinical Practice I (1-3)**

One unit represents three hours per week.

Prerequisites: Credit or concurrent registration in Audiology 705 and 710.

Applications of clinical procedures to patient assessment. Includes computer-based simulated cases, clinical observations, and supervised patient care involving diagnostics and hearing aid evaluations at the on-campus audiology clinic. May be repeated.

#### **AUD 705. Diagnostic Audiology I (3)**

Two lectures and two hours of activity.

Prerequisite: Admission to doctoral program.

Theoretical bases and technical experience necessary to perform basic audiologic assessment, including otoscopy, pure-tone, masking, speech, and immittance measures, testing and patient counseling. Hands on experiences with different tests and equipment.

#### **AUD 710. Hearing Amplification I (4)**

Three lectures and two hours of activity.

Prerequisite: Admission to doctoral program.

Hearing aid components and signal processing, electroacoustic analysis, prescriptive techniques, verification procedures, hearing aid orientation, follow-up and troubleshooting.

#### **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.

Prerequisite: 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 audiologic 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)**

Prerequisite: Concurrent registration in Audiology 701.

Presentations and discussion of clinical cases and issues relative to clinical practice. Students' clinical experiences are discussed relative to medical and audiological assessment and management.

#### **AUD 725. Pediatric Audiology (3)**

Prerequisites: Audiology 700 and 705.

Development of normal and abnormal auditory behavior, behavioral and physiological testing of infants and children, hearing screening for pre- and school-age children, educational audiology, auditory processing disorders, counseling of patient and family, and assistive listening devices.

#### **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)**

One unit represents three hours per week.

Prerequisites: Open to third year doctoral students and consent of instructor.

Diagnostics and hearing aid evaluations/ fittings in the on-campus audiology clinic. May be repeated. Maximum credit three units.

**AUD 805. Seminar in Vestibular Physiology, Assessment, and Rehabilitation (3)**

Prerequisite: 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 (2)**

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)**

Prerequisite: Admission to doctoral program.

Human context of hearing impairment and management; possibilities and limitations of hearing aids, cochlear implants, speechreading, and assistive devices in minimizing disability, and psychosocial factors that determine handicap and outcome of audiological intervention.

**AUD 821. Clinical Case Studies and Staffings II (1)**

Prerequisite: Concurrent registration in Audiology 801 or 831.

Clinical cases and issues relative to clinical practice. Students' clinical experiences discussed relative to medical and audiological assessment and management.

**AUD 825. Seminar in Professional Issues (2)**

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)**

Prerequisite: Open to third year doctoral students.

Audiology and hearing science. Reading and critiquing journal articles and data emerging from research laboratories.

**AUD 831. Field Clinical Practice (3-6)**

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)**

Prerequisite: Admission to doctoral program.

Psychophysical concepts underlying clinical audiology. Psychoacoustic abilities of individuals with normal hearing and sensorineural hearing loss. Practical experience in conducting psychoacoustic tests.

**AUD 840. Auditory Evoked Potentials II (2)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisites: Advancement to candidacy and consent of adviser.

On-line discussion of clinical experiences and interesting cases. Maximum credit six units.

**AUD 897. Independent Research (1-3) Cr/NC/RP**

Prerequisite: 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

In the College of Sciences

**OFFICE: Geology/Mathematics/Computer Science 625**

**TELEPHONE: 619-594-4573**

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

## Associated Faculty

Faramarz Valafar, Ph.D., Associate Professor of Computer Science,  
Director of Bioinformatics and Medical Informatics

Willa Fields, D.N.Sc., Professor of Nursing

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

Richard A. Levine, Ph.D., Professor of Statistics

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

Ralph-Axel Mueller, Ph.D., Professor of Psychology

Claire Murphy, Ph.D., Professor of Psychology

Usha Sinha, Ph.D., Professor of Physics

William G. Tong, Ph.D., Distinguished Professor of Chemistry and  
Biochemistry

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

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

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

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

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

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

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

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

Barbara Ann Bailey, Ph.D., Assistant Professor of Statistics

Elizabeth A. Dinsdale, Ph.D., Assistant Professor of Biology

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

Kristin A. Duncan, Ph.D., Assistant Professor of Statistics

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

Pamela Moses, Ph.D., Assistant Professor of Psychology

## Adjunct Faculty

### University of California, San Diego:

Lucila Ohno-Machado, M.D., Ph.D., Professor of Medicine

Gerard Hardiman, Ph.D., Associate Professor of Medicine

Hyeon-Eui Kim, Ph.D, M.P.H., R.N., Assistant Professor,  
Division of Biomedical Informatics

Christopher H. Woelk, Ph.D., Assistant Professor,  
Division of Biomedical Informatics

### Genomics Institute of the Novartis Research Foundation:

Andrew I. Su, Ph.D., Computational Discovery

### La Jolla Institute for Allergy and Immunology:

Bjoern Peters, Ph.D., Center for Infectious Disease

Anjano Rao, Ph.D., Signaling and Gene Expression Research

### VA Hospital:

Alan Calvitti, Ph.D., System Biology

### West Wireless Health Institute:

Hassan Ghazemzadeh, Ph.D., Research Engineering Group

## 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 distinct tracks. The first is a professional science master concentration preparing students for immediate productivity in industrial or clinical settings. The second is a traditional 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 references who have submitted letters 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) English language 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 92182-7720

- (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 Four of this bulletin.

**Specific Requirements for the Master of Science Degree**

(Major Code: 07994) (SIMS Code: 771490)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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)
  - BIOMI 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 (3)
- CS 514 Database Theory and Implementation (3)
- CS 520 Advanced Programming Languages (3)
- CS 535 Object-Oriented Programming and Design (3)
- CS 605 or Scientific Computing (3)
- COMP 605
- STAT 551A Probability and Mathematical Statistics (3)
- STAT 551B Probability and Mathematical Statistics (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 (3) Cr/NC/RP

**Professional Science Master Concentration**

- 1. Complete 12 units of required core courses.
  - BIOL 510 Molecular Evolution (3)
  - BIOMI 568 Bioinformatics (3)
  - CHEM 560 General Biochemistry (3)
  - CS 600 Methods in Bioinformatics, Medical Informatics, and Cheminformatics (3)
- 2. Complementary: Twelve units in a field complementary to the student's background with approval of the graduate coordinator selected from the following courses.
  - CHEM 567 Biochemistry Laboratory (3)
  - CS 514 Database Theory and Implementation (3)
  - CS 520 Advanced Programming Languages (3)
  - CS 535 Object-Oriented Programming and Design (3)
  - CS 605 or Scientific Computing (3)
  - COMP 605
  - STAT 551A Probability and Mathematical Statistics (3)
  - STAT 551B Probability and Mathematical Statistics (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. Five units of research including Thesis:
  - BIOMI 797 Research (2) Cr/NC/RP
  - or
  - BIOMI 798 Special Study (2) Cr/NC/RP
  - BIOMI 799A Thesis or Project 799 (3) Cr/NC/RP

**Courses Acceptable on Master's Degree Program in Bioinformatics and Medical Informatics (BIOMI)**

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

**UPPER DIVISION COURSE**

**BIOMI 568. Bioinformatics (3)**  
(Same course as Biology 568)  
Two lectures and three hours of laboratory.  
Prerequisite: Biology 366.

Bioinformatics analysis methods and programming skills. Practical bioinformatic software for sequence analysis, bioinformatic algorithms and programming fundamentals.

**GRADUATE COURSES**

**BIOMI 600. Methods in Bioinformatics, Medical Informatics, and Cheminformatics (3)**  
(Same course as Computer Science 600)

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.

## ***Bioinformatics and Medical Informatics***

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

Prerequisite: 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**

Prerequisite: 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.

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

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

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

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# 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

Andrew J. Bohonak, Ph.D., Associate Professor of Biology,  
Vice Chair of Department

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

J. David Archibald, Ph.D., Professor of Biology

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

Annalisa Berta, Ph.D., Professor of Biology  
(Graduate Adviser, Evolutionary Biology Ph.D. Program)

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

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

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

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

Christopher C. Glembotski, Ph.D., Professor of Biology  
(Graduate Coordinator, Biology)

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

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

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

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., Distinguished Professor of Biology  
(Graduate Adviser, Ecology Ph.D. program)

Jacques Perrault, Ph.D., Professor of Biology

Robert S. Pozos, Ph.D., Professor of Biology

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

Forest Rohwer, 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., Distinguished Professor of Biology

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

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

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

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

Scott T. Kelley, Ph.D., Associate Professor of Biology

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

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

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

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

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

Elizabeth Dinsdale, Ph.D., Assistant Professor of Biology

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

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

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

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

Jeremy Long, Ph.D., Assistant Professor of Biology

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

Ricardo Zayas, 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 three doctoral programs leading to the Ph.D. in biology (cell and molecular) with the University of California, San Diego, in ecology with the graduate group in ecology at the University of California, Davis, and in evolutionary biology with the University of California, Riverside. These academic programs can prepare students for careers in research, education, and public service.

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 the Coastal and Marine Institute Laboratory on San Diego Bay and the SDSU Field Stations program with 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) Students with international coursework must submit an evaluation report through one of these two companies: Course-by-Course Evaluation Report or Detailed Report;
- (3) GRE scores (<http://www.ets.org>, SDSU institution code 4682);
- (4) English language 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 three 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 (<http://www.bio.sdsu.edu/cmob/propsinfo.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 and interest in the joint doctoral program;
- (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 graduate group in ecology, University of California, Davis.

### Ph.D. Degree in Evolutionary Biology

The following materials should be mailed or delivered to:

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

- (1) Curriculum vitae or resume;
- (2) Three letters of recommendation in sealed and signed envelopes.

## 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 Four 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

#### (Major Code: 04011) (SIMS Code: 771402)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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

#### (Major Code: 04011) (SIMS Code: 771401)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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) (SIMS Code: M.A. 771416; M.S. 771417):** 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) (SIMS Code: M.A. 771488; M.S. 771488):** 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) (SIMS Code: M.S. 771451):** A separate graduate degree is offered in microbiology. Program adviser, Segall.

**Molecular Biology (Major Code: 04161) (SIMS Code: M.A. 771459; M.S. 771458):** 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) (SIMS Code: M.A. 771466; M.S. 771465):** 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 Four 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) (SIMS Code: 771451)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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

### Biology (Cell and Molecular)

**(Major Code: 04011) (SIMS Code: 771402)**

<http://www.bio.sdsu.edu/cmob/propsinfo.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. Frey, T. Huxford, J. Love.

**Cardiovascular molecular biology:** C. Glembotski, R. Gottlieb, 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.

**Microbial molecular ecology:** E. Dinsdale, M. Edwards, F. Rohwer.

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

**Molecular evolution:** 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.

### 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 2009-10, 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: G. Harris

Faculty: Bernstein, Bizzoco, Dinsdale, Doran, Feuer, Edwards, Frey, Glembotski, Gottlieb, Harris, Huxford (Chemistry and Biochemistry), Kelley, Lipson, Love (Chemistry and Biochemistry), Maloy, McGuire, Paolini, Perrault, Rohwer, Segall, Stumph (Chemistry and Biochemistry), Sussman, Tsoukas, van der Geer (Chemistry and Biochemistry), Waters, Wolkowicz, Zeller, Zayas.

##### University of California, San Diego:

Graduate Adviser: S. Brody

Faculty: All UCSD Biology Faculty

### Ecology

(Major Code: 04201) (SIMS Code: 771418)

[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 and fishes. Community ecology of coral reefs, kelp forests, eelgrass beds, rocky shores, and sandy beaches.

**Ecosystem ecology and global change:** Effects of global change (elevated CO<sub>2</sub> and climate change) on the structure and functioning of terrestrial and marine ecosystems, including local chaparral, deserts, the Alaskan Arctic and international locations in Baja California including deserts, mangroves, lagoon ecosystems, tropical peatlands of Indonesia, the Mediterranean Basin, and associated marine ecosystems.

**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 SDSU (Biology 645 and 745), UCD (three quarters of Ecology 296, two to three Ecology 290) seminars. 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: Sharon Lawlor

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

### Evolutionary Biology

(Major Code: 04016) (SIMS Code: 771485)

The cooperating faculties of the Department of Biology, San Diego State University (SDSU) and the Graduate program in Evolution, Ecology, and Organismal Biology (EEOG) at the University of California, Riverside (UCR) offer a joint program in evolutionary biology leading to the Ph.D. The research interests of the participating faculty cover a wide range of topics in evolutionary biology.

### Program

#### Undergraduate Preparation for Admission

Applicants for admission to the doctoral program must present evidence of adequate preparation and capacity for advanced work in evolutionary biology. Preparation should include a strong background in biology. 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, Riverside, and San Diego State University.

### Advising Committee

At the start of the student's first year in the program, the student will form a Guidance Committee. This committee will consist of four faculty members, two chosen from each institution. From SDSU, the committee must include the student's prospective dissertation advisor and an additional, programmatically appropriate, member. From UCR, the committee members will be drawn from faculty within the EEOB graduate program. In consultation with the student, the Guidance Committee plans the student's program through Advancement to Candidacy.

### Course Requirements

The Guidance Committee works with the student to develop an individualized course of study and identify potential deficiencies. Students in the joint doctoral program will have similar requirements as students in UCR's EEOB graduate program. Specifically, the joint doctoral students will take the Theory of Evolution (UCR Biol 216) and at least two disciplinary courses (see below; the two required disciplinary courses must cover different disciplines; at least one disciplinary course must be taken at UCR). In addition, the students will enroll in a current research topics seminar course during each UCR quarter or SDSU semester of residence. The majority of required course work should be completed prior to the Written Qualifying Examination, which is taken at the end of the second year. All required disciplinary courses (see below) must be completed before taking the Oral Qualifying Examination. An example of the required coursework and anticipated schedule for completion is presented below:

#### Year One at SDSU

Each semester:

BIOL 795 Seminar in Ecology and Evolutionary Biology (3)  
Cr/NC

At least one of the following courses:

BIOL 624 Population Genetics (3)  
BIOL 740 Phylogenetic Systematics (3)

#### Year Two at UCR

UCR BIOL 216 The Theory of Evolution

Each quarter of residence:

UCR BIOL 252 General Colloquium in Biology (or another disciplinary colloquium)

UCR BIOL 265 Advances in Population and Evolutionary Biology

At least one of the following courses:

UCR BIOL 211 Ecology: Genes to Ecosystems  
UCR BIOL 212 Ecological Systems in Space and Time  
UCR BIOL 213 Behavioral Ecology  
UCR BIOL 214 Evolutionary Genetics  
UCR BIOL 217 Population and Community Ecology  
UCR BIOL 219 Theory of Systematics  
UCR BIOL 220 Evolutionary Physiology

### Qualifying Examinations

#### Qualifying Committee

By the end of the second year, students are expected to have taken a written qualifying examination. The written examination is evaluated by an ad hoc committee of faculty participating in the JPPEB program. The committee will have a minimum of four faculty, at least two from SDSU EB and two from UCR EEOB. Upon passing the written examination, the student (in consultation with their SDSU and UCR co-advisers) selects an Oral Examination Committee. This committee normally consists of five faculty members: a minimum of two SDSU EB faculty and a minimum of two UCR EEOB faculty, and a UCR outside committee member. The student writes a detailed research proposal and schedules an oral examination. During the examination, the candidate must defend the research proposal and may be questioned on other topics by the Oral Examination Committee.

### Joint Dissertation Committee

After passing the Written and Oral Examinations, students file for Advancement to Candidacy with the Graduate Divisions at SDSU and UCR. On the petition, students state the dissertation topic and selects the members of the Dissertation Committee, to be approved by the Graduate Division. This committee will consist of at least four faculty members, including the major adviser. At least two members must be from at least two members must be from the evolutionary biology faculty of SDSU and the EEOB faculty of UCR (with approval from the Graduate Division at UCR).

### Dissertation

Following successful completion of the qualifying examination, the final requirement of the Ph. D. degree will be satisfactory completion of a dissertation consisting of original and significant research carried out under the guidance of the joint dissertation committee. Requirements currently in force at SDSU and UCR must be met for completing and filing the dissertation.

### Award of the Degree

The Doctor of Philosophy degree in Evolutionary 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. 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 graduate teaching associate.

### Faculty

#### Graduate Advisers:

San Diego State University: A. Berta

University of California, Riverside: C. Hayashi

**SDSU Faculty:** Archibald, Berta, Bohonak, Burns, Clark, Hedin, Kelley, Rohwer, Reeder, Simpson, Waters, Zeller.

### Courses Acceptable on Master's and Doctoral Degree Programs in Biology (BIOL)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

#### 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.

Prerequisite: Biology 352.

Evolutionary biology including genetics of populations, speciation, systematic biology, adaptation, role of development in evolution, evolution of behavior, and comparative biology. Evolutionary biology as the central organizing principle of biology.

#### BIOL 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 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 203, 203L, 204, 204L 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 203, 203L, 204, 204L. 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 516A. Marine Larval Ecology Research Part 1 (4)**

Three lectures and three hours of laboratory.

Prerequisites: Biology 203, 203L, 204, 204L, 215.

Biology of marine invertebrate larvae. Biodiversity, evolution of complex life cycles, larval culture techniques, physiological and ecological consequences of environmental variability during larval development. Designing and peer reviewing original research proposals related to larval ecology.

**BIOL 516B. Marine Larval Ecology Research Part 2 (4)**

Three lectures and three hours of laboratory.

Prerequisites: Biology 516A and consent of instructor.

Research experience investigating marine invertebrate larval ecology.

**BIOL 517. Marine Ecology (4)**

Two lectures and six hours of laboratory.

Prerequisite: Biology 354.

Ecological concepts as applied to pelagic and benthic marine organisms and their environment. Field and laboratory experience in oceanographic techniques, particularly the coastal environment.

**BIOL 523. Herpetology (4)**

Two lectures and six hours of laboratory.

Prerequisites: Biology 203, 203L, 204, 204L. 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 203, 203L, 204, 204L. 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 203, 203L, 204, 204L. 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 203, 203L, 204, 204L. 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 (3)**

Prerequisites: Biology 203, 203L, 204, 204L, 215; Psychology 211 and 260 for psychology majors.

Biological bases of animal behavior with emphasis on ethological approach, including evolution and adaptive significance of behavior.

**BIOL 527L. Animal Behavior Laboratory (1)**

Three hours of laboratory.

Prerequisite: Credit or concurrent registration in Biology 527.

Animal behavior with emphasis on ethological approach to include evolution and adaptive significance of behavior, data collection and analysis, scientific writing and results.

**BIOL 528. Microbial Ecology (3)**

Two lectures and three hours of laboratory.

Prerequisites: Biology 203, 203L, 204, 204L. 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 203, 203L, 204, 204L. 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 203, 203L, 204, 204L.

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 203, 203L, 204, 204L. 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 538. Environmental Policy and Regulations (3)**

Prerequisite: 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.

Prerequisite: Biology 354.

Human impacts on ecosystems, the resultant endangerment and extinction of plant and animal species, and strategies for the protection and recovery of threatened forms.

**BIOL 541. Ecology of Fishes and Fisheries Biology (3)**

Two lectures and three hours of laboratory.

Prerequisite: Biology 354.

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 542. Chemical Ecology (3)**

Prerequisites: Biology 354 and Chemistry 201.

Ecology of chemical signals involved in organismal interactions in aquatic and terrestrial ecosystems. Focal organisms range from plankton, to plants, to mammals. Chemical ecology studies and experiments.

### **BIOL 544. Terrestrial Ecosystems and Climate Change (3)**

Prerequisite: Biology 354.

Controls on fluxes and stocks of nutrients within terrestrial ecosystems, ecosystem responses, feedbacks to climate change. Climate systems, water transport, production and decomposition, nutrient cycling, stable isotopes, spatial and temporal integration.

### **BIOL 546. Systematics and Biodiversity (3)**

Two lectures and two hours of activity.

Prerequisite: Biology 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)**

Prerequisite: Biology 350 or 366.

Physiology of microbial growth, bacterial structure and function, genetics of bacteriophages and bacteria.

### **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 (2)**

Prerequisites: Biology 204, 204L 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: Biology 204, 204L, and Physics 180B. Recommended: 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: Biology 204, 204L, and Physics 180B. Recommended: Biology 555.

Biological sample preparation and operation of transmission electron microscope.

### **BIOL 560. Animal Physiology (3)**

Prerequisites: Biology 203, 203L, 204, 204L; 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 203, 203L, 204, 204L; 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.

### **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) (Same course as Bioinformatics and Medical Informatics 568)**

Two lectures and three hours of laboratory.

Prerequisite: Biology 366.

Bioinformatics analysis methods and programming skills. Practical bioinformatic software for sequence analysis, bioinformatic algorithms and programming fundamentals.

### **BIOL 570. Neurobiology (3)**

Prerequisite: Biology 366 or 590 or Psychology 360 for psychology majors.

Structure and function of the nervous system to include cellular and molecular mechanisms underlying neuronal excitability and synaptic function, nervous system development, cellular and systems analysis of sensory, motor and higher brain functions. Emphasis on experimental approaches.

### **BIOL 575. Molecular Basis of Heart Disease (3)**

Prerequisite: Biology 366 or 590.

Current literature on the molecular basis of disordered physiology leading to heart disease.

### **BIOL 576. Developmental Biology (3)**

Prerequisite: Biology 366. Strongly recommended: Biology 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)**

Prerequisite: 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 588. General Parasitology (3)**

Two lectures and three hours of laboratory.

Prerequisites: Biology 203, 203L, 204, 204L. Strongly recommended: Completion of six upper division units in the major.

Parasites of medical and veterinary importance with special reference to those of humans. Practical training in identification of common human and animal parasites. Parasitological examination of local wildlife, collection and preservation of parasites.

### **BIOL 589. Stem Cell and Regenerative Biology (3)**

Prerequisites: Biology 366 and credit or concurrent registration in Biology 366L.

Stem cell basics, cloning, tissue engineering, research on animal models of regeneration, political and ethical issues surrounding stem cell debate.

### **BIOL 590. Physiology of Human Systems (4)**

Three lectures and one hour of discussion.

Prerequisites: Biology 366, Chemistry 365, Physics 180B, 182B; or for the bioengineering emphasis: Physics 195, 196, 197.

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)**

Prerequisite: Consent of instructor.

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

Prerequisite: Biology 352 or 354 or 366.

Application of univariate statistical techniques in biological sciences.

**GRADUATE COURSES****BIOL 600. Seminar (2-3)**

Prerequisite: Consent of instructor.

An intensive study in advanced biology. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

**BIOL 606. Biological Data (3)**

Two lectures and three hours of laboratory.

Prerequisite: 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.

Prerequisite: 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 645. Theory and Principles of Ecology I (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)**

Prerequisite: Biology 354.

Ecological concepts as applied to the terrestrial environment. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit four units applicable to a master's degree.

**BIOL 696. Advanced Topics in Biology (1-3)**

Prerequisite: Consent of instructor.

Intensive study in specific areas of biology. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**BIOL 735. Seminar in Biogeography (2)**

Prerequisite: Biology 354.

Concepts and principles of distributional history of plant and animal groups, and origins and dispersal of modern faunas and floras.

**BIOL 740. Phylogenetic Systematics (3)**

Two lectures and three hours of laboratory.

Prerequisite: Biology 354.

Theory and methodology of phylogenetic systematics. Includes use of computer algorithms, survey of literature and preparation of a project in phylogenetic systematics. Not open to students with credit in Biology 740 (Seminar in Phylogenetic Systematics).

**BIOL 745. Theory and Principles of Ecology II (3)**

Prerequisites: Admission to graduate program in biology and Biology 645.

Community and ecosystem ecology to include foodwebs, landscapes, ecosystems, biogeochemistry. Conservation and applied ecology to include climate change, anthropogenic impacts on natural systems.

**BIOL 766. Advanced Topics in Population and Community Ecology (2-4)**

Prerequisites: Biology 354 and consent of instructor.

Selected topics in population and community ecology. May be repeated with new content and consent of the graduate adviser in ecology. Maximum credit six units applicable to a master's degree.

**BIOL 770. Seminar in Systematics and Evolution (2-3)**

Prerequisite: Consent of instructor.

Selected topics in systematics and evolution. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit four units applicable to a master's degree.

**BIOL 795. Seminar in Ecology and Evolutionary Biology (1) Cr/NC**

Prerequisite: Graduate standing.

Recent research advances in ecology and evolutionary biology. May be repeated with new content. Maximum credit six units applicable to a graduate degree.

**BIOL 797. Research (1-3) Cr/NC/RP**

Research in one of the fields of biology. Maximum credit six units of 797 and 798 applicable to a master's degree.

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

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

Individual study. Maximum credit six units of 797 and 798 applicable to a master's degree.

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

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

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

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

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

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

**DOCTORAL COURSES****BIOL 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Independent investigation in the general field of the dissertation.

**BIOL 899. Doctoral Dissertation (1-15) Cr/NC/RP**

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.

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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  
Roberta A. Gottlieb, M.D., Professor of Biology  
Stanley R. Maloy, Ph.D., Professor of Biology and  
Dean of the College of Sciences  
Shelli R. McAlpine, Ph.D., Professor of Chemistry and Biochemistry  
Kathleen L. McGuire, Ph.D., Professor of Biology  
Jacques Perrault, Ph.D., Professor of Biology  
Forest Rohwer, Ph.D., Professor of Biology  
Anca Mara Segall, Ph.D., Professor of Biology  
William E. Stumph, Ph.D., Professor of Chemistry and Biochemistry  
Mark A. Sussman, Ph.D., Distinguished Professor of Biology  
Constantine Tsoukas, Ph.D., Professor of Biology (Graduate Adviser)  
Scott T. Kelley, Ph.D., Associate Professor of Biology  
John J. Love, Ph.D., Associate Professor of Chemistry and  
Biochemistry  
P.J.E. (Jenny) Quintana, Ph.D., Associate Professor of Public Health  
Peter van der Geer, Ph.D., Associate Professor of Chemistry and  
Biochemistry  
Elizabeth R. Waters, Ph.D., Associate Professor of Biology  
Robert W. Zeller, Ph.D., Associate 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  
Roland Wolkowicz, Ph.D., Assistant Professor of Biology  
Ricardo Zayas, 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 Four 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) (SIMS Code: M.A. 771459; M.S. 771458)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete a graduate program of 30 units of 500-level and above courses selected, with the approval of the MBI graduate adviser. A list of suggested courses is presented on the following page. All students entering the Master of Science program in molecular biology will be required to take an advanced course in molecular biology. At least 15 units of the courses selected must be in 600- and 700-numbered courses including 799A, Thesis. The student must complete at least three units of Molecular Biology 601 and six units of Molecular Biology 610. With the approval of the graduate adviser of molecular biology, a student may substitute for Molecular Biology 610 another 600 or 700 numbered course. A final oral examination on the thesis will be administered by the thesis committee.



## Courses Acceptable for the Concentration in Molecular Biology (M BIO)

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### UPPER DIVISION COURSES

#### Biology (BIOL)

- BIOL 510. Molecular Evolution (3)  
 BIOL 549. Microbial Genetics and Physiology (3)  
 BIOL 554. Molecular Virology (3)  
 BIOL 555. Principles of Electron Microscopy (2)  
 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 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)

Prerequisite: Consent of instructor.

Evaluation of current literature in molecular biology. May be repeated with new content. Maximum credit six units applicable to a master's degree.

#### M BIO 601. Colloquium in Molecular Biology Research (1) Cr/NC/RP

Recent research advances in selected areas of modern molecular biology presented by faculty of the Molecular Biology Institute and established outside investigators. May be repeated with new content. Open only to students admitted to the molecular biology program or by permission of the graduate adviser for molecular biology. Maximum credit six units, three of which are applicable to a master's degree.

#### M BIO 610. Advanced Topics in Molecular and Cell Biology (1-4)

Prerequisite: Graduate standing in a life or physical science.

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

# Biomedical Quality Systems

In the Center for Bio/Pharmaceutical and Biodevice Development  
and the College of Sciences

**OFFICE: Geology/Mathematics/Computer Science 629**  
**TELEPHONE: 619-594-0138 / FAX: 619-594-6381**  
**E-MAIL: [cbbd@sciences.sdsu.edu](mailto:cbbd@sciences.sdsu.edu)**  
**<http://www.cbbd.sdsu.edu>**

**Graduate Adviser: Catherine J. Atkins, Ph.D.**

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

\*E. Dale Sevier, Ph.D., Director of the 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 Bio/Pharmaceutical 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)

No new students are being admitted to the Master of Science program. For further information, contact Dr. Catherine J. Atkins, Graduate Adviser and Associate Dean in the College of Sciences. Applications are being accepted for the Advanced Certificate in Biomedical Quality Systems.

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) English language 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, CBBB  
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 Four of this bulletin.

**Specific Requirements for the Master of Science Degree**

**(Major Code: 09994) (SIMS Code: 771491)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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)
  - R A 778 Quality Control and Quality Assurance: Pharmaceuticals, Biologics, and Medical Devices (3)
  - B A 651 Organizational Behavior (3)
  - B A 662 Operations and Supply Chain Management (3)
  - MIS 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 696 Advanced Topics in Biomedical Quality Systems (1-4)
- BQS 740 Statistical Process Control (3)
- BQS 741 Statistical Experiment Design (3)
- BQS 797 Research (1-3) Cr/NC/RP
- BQS 798 Special Study (1-3) Cr/NC/RP
- R A 601 Pharmaceutical, Biotechnology, and Medical Device Industries (3)

- R A 770 Current Good Manufacturing Practices – General Concepts (3)
- R A 771 Current Good Manufacturing Practices – Advanced Topics (3)
- R A 773 Medical Device Regulations (3)
- R A 774 Investigational and Marketing Applications for Drugs, Biologics, and Medical Devices (3)
- R A 775 Clinical Trials: Issues in Design, Conduct, and Evaluation (3)
- R A 776 Validation Aspects of Drugs, Biologics, and Device Product Development and Manufacturing, Including Computer Related Systems and Software (3)

**Advanced Certificate in Biomedical Quality Systems**

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

The Advanced Certificate in Biomedical Quality Systems involves the completion of Biomedical Quality Systems 601, 603, 730, and 745. Biomedical Quality Systems 601 covers the philosophies, organization, and active role of the international regulatory agencies. Biomedical Quality Systems 603 is designed to present the major elements and principles of the international quality systems used in the development and commercialization of biomedical products. In Biomedical Quality Systems 730, students learn the major elements and principles of the international regulations governing the development and commercialization of biomedical products. Biomedical Quality Systems 745 will ensure that students build a foundational and practical knowledge in quality systems and biomedical regulations related to major elements and principles of international regulations governing control of data, documents, information, and records associated with biomedical products.

The program adviser is Dr. Catherine J. Atkins, Graduate Adviser and Associate Dean in the College of Sciences. For more information see <http://interwork.sdsu.edu/cbbd/>. To enroll in this certificate program, call 619-594-5152.

### Courses Acceptable on Master's Degree Program in Biomedical Quality Systems (BQS)

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

#### GRADUATE COURSES

##### **BQS 601. Biomedical Quality Systems (3)**

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)**

Prerequisite: 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 621. Quality Audits: Internal, Vendors, and Contract Services (3)**

Prerequisite: Biomedical Quality Systems 601.

Audit topics explored from viewpoint of industry professional, current industry, and regulatory information.

##### **BQS 696. Advanced Topics in Biomedical Quality Systems (1-4)**

Prerequisite: Consent of instructor.

Current issues and topics in quality systems evaluated and discussed. Recent developments and changes in selected areas of quality systems presented by faculty and industry professionals. May be repeated with new content. See *Class Schedule* for specific content. 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)**

Prerequisite: Biomedical Quality Systems 601.

Roles and responsibilities of a Quality Assurance (QA) function in the biopharmaceutical, medical device, and pharmaceutical industries. Equip middle and upper level biomedical professionals with "real world" skills, approaches, and solutions to multifaceted quality issues.

##### **BQS 740. Statistical Process Control (3)**

Prerequisites: Biomedical Quality Systems 601 and basic statistics.

Statistical methods for quality control and improvement, focusing on control charts, measurement systems analysis, process improvement, and process capability assessment.

##### **BQS 741. Statistical Experiment Design (3)**

Prerequisite: Biomedical Quality Systems 601.

Effective experimental strategy, factorial and fractional factorial designs, experiments with random factors, nested effects, categorical factors, and split plots. Use of computer software for design construction and analysis.

##### **BQS 745. Document Control Quality System (3)**

Prerequisite: Biomedical Quality Systems 601.

Regulatory requirements for developing and manufacturing documentation, supporting the quality assurance function.

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

Prerequisite: Advancement to candidacy.

Research in the area of quality systems. Maximum credit six units applicable to a master's degree.

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

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

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

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

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**

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

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

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# Biostatistics and Biometry

In the College of Sciences and the  
College of Health and Human Services

## Faculty Committee for Biostatistics and Biometry

Douglas H. Deutschman, Ph.D., Professor of Biology  
Juanjuan Fan, Ph.D., Professor of Statistics  
Richard A. Levine, Ph.D., Professor of Statistics  
Kung-Jong Lui, Ph.D., Professor of Statistics  
John E. Alcaraz, Ph.D., Associate Professor of Public Health  
Ming Ji, Ph.D., Associate Professor of Public Health  
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 Acceptable for Biostatistics and Biometry

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### 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 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. The graduate degree may also prepare students for a teaching career. 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 English language 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) English language score, if medium of instruction was in a language other than English (<http://www.ets.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 Four of this bulletin.

### Specific Requirements for the Master of Business Administration Degree

**(Major Code: 05011) (SIMS Code: 221702)**

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)
  - B A 650 Financial Reporting and Analysis I (3)
  - B A 651 Organizational Behavior (3)
  - B A 652 Statistical Analysis (3)
  - B A 653 Managerial Economics (3)
  - B A 655 Marketing (3)
  - B A 662 Operations and Supply Chain Management (3)
  - B A 665 Financial Management I (3)
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)
MGT 722	Seminar in Business Ethics and Social Institutions (3)
MGT 746	Seminar in Corporate Governance (3)
MIS 755	Information Systems Security Management (3)

#### Management of Technology Issues in Business Theme

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

3. Complete 18 units of electives if one or more core courses are required; 21 units of electives if all seven core course requirements are waived. 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, except for a student pursuing a specialization in Athletics and Fitness Management or Health Services Administration, who must complete courses from two-out-of-the-five departments in the College of Business Administration.

5. Complete a culminating experience course. (3 units)
  - B A 795 Integrative Business Analysis (3)
  - B A 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:

Specializations	Major Code	SIMS Code
Accountancy	05021	221908
Athletics & Fitness Management	05011	221714
Entrepreneurship	05997	222361
Finance	05041	222117
Health Services Administration	05011	221710
Information Systems	07021	222338
International Business	05131	223651
Management	05061	222561
Marketing	05091	222773
Project Management	05011	221719
Real Estate	05111	222194
Supply Chain Management	05064	222381

**Sports Business Management (Offered only through the College of Extended Studies) (Major Code: 05011) (SIMS Code: 221715):** 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 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 are scheduled in a modular fashion on alternate Fridays and Saturdays over a 24-month period for the convenience of working executives.

## Business Administration

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 Four 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

#### (Major Code: 05011) (SIMS Code: 221705)

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

### Master of Science Degree in Business Administration

#### (Major Code: 05011) (SIMS Code: 221701)

#### 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:

B A 650	Financial Reporting and Analysis I (3)
B A 651	Organizational Behavior (3)
B A 652	Statistical Analysis (3)
B A 653	Managerial Economics (3)
B A 655	Marketing (3)
B A 662	Operations and Supply Chain Management (3)
B A 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. Current students are required to complete any needed program prerequisites by enrolling in graduate courses and may not satisfy prerequisites by enrolling in undergraduate equivalency courses.

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 Four 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 Four of this bulletin, the student must complete a graduate program of at least 30 approved units to include at least 21 units in 600- and 700-numbered courses (except for the concentration in Financial and Tax Planning which requires at least 18 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; Management Information 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 "Requirements for the Master's Degree," in Part Four of this Bulletin.

Concentrations	Major Code	SIMS Code
Entrepreneurship	05997	222360
Finance	05041	222115
*Financial and Tax Planning	05043	222124
Information Systems	07021	222336
International Business	05131	223650
Management	05061	222557
Marketing	05091	222771
**Real Estate	05111	222192
Supply Chain Management	05064	222382
Taxation	05022	221929

#### 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 590.

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) **OR**
- 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) (SIMS Code: 221720)**

**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.

1. Complete the following core of seven courses. (21 units)
  - B A 650 Financial Reporting and Analysis I (3)
  - B A 651 Organizational Behavior (3)
  - B A 652 Statistical Analysis (3)
  - B A 653 Managerial Economics (3)
  - B A 655 Marketing (3)
  - B A 662 Operations and Supply Chain Management (3)
  - B A 665 Financial Management I (3)

The requirement to complete individual core courses may be waived by the director of graduate business programs if an equivalent course has been completed. Equivalency is determined by course content, institution at which course was taken, grade received, and

time since course was taken. Current students are required to enroll in graduate courses and may not satisfy core course requirements by enrolling in undergraduate equivalency courses.

2. Management of Technology Theme (3 units)
  - MIS 688 Information Systems in Organizations (3)
  - MIS 691 Decision Support Systems (3)
3. B A 780 Field Studies in Business (3)
4. Complete six units of electives if two or more core courses are required; nine units of electives if one core course is required; 12 units of electives if no core courses are required.
5. B A 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 **only**
- Year 2 San Diego State University College of Business  
Administration **only**
- 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) (SIMS Code: 221721)**

**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)
  - B A 650 Financial Reporting and Analysis I (3)
  - B A 651 Organizational Behavior (3)
  - B A 652 Statistical Analysis (3)
  - B A 653 Managerial Economics (3)
  - B A 655 Marketing (3)
  - B A 662 Operations and Supply Chain Management (3)
  - B A 665 Financial Management I (3)

The requirement to complete individual core courses may be waived by the director of graduate business programs if an equivalent course has been completed. Equivalency is determined by course content, institution at which course was taken, grade received, and time since course was taken.

2. Management of Technology Issues in Business Theme (3 units)
  - MIS 688 Information Systems in Organizations (3)
  - MIS 691 Decision Support Systems (3)
3. B A 780 Field Studies in Business (1-3) (Cr/NC)
4. Complete six units of electives if two or more core courses are required; nine units of electives if one core course is required; 12 units of electives if no core courses are required.
5. B A 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) (SIMS Code: 992001)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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):
  - B A 650 Financial Reporting and Analysis I (3)
  - B A 651 Organizational Behavior (3)
  - B A 652 Statistical Analysis (3)
  - B A 653 Managerial Economics (3)
  - B A 655 Marketing (3)
  - B A 662 Operations and Supply Chain Management (3)
  - B A 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)                    |
| MIS 755   | Information Systems Security Management (3)            |

#### Management of Technology Issues in Business Theme

- |         |  |
|---------|--|
| MIS 688 | Information Systems in Organizations (3) |
| MIS 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 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 Globalization (3)
- SOC 740 Seminar in Social Psychology: Sociological Approaches: 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 B A 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 Four 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 B A 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.

**Courses Acceptable on the Master of Business Administration and the Master of Science Degree Programs (B A)**

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

**GRADUATE COURSES**

**B A 650. Financial Reporting and Analysis I (3)**

Prerequisite: Classified graduate standing.

Understanding of accounting procedures and judgments underlying corporate financial statements; ability to read and analyze these statements; make inferences from them about financial health, likelihood of success, and other important attributes of various business entities.

**B A 651. Organizational Behavior (3)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: Classified graduate standing.

Role and function of marketing in the organization and society. Planning, implementation, and evaluation of marketing strategies and programs. Not open to students with credit in Marketing 370.

**B A 660. Managerial Accounting (3)**

Prerequisite: Classified graduate standing.

Design and use of cost systems to establish and enhance an organization's competitive advantage in a global environment. Decision making, planning, control and business ethics in managerial decision making.

**B A 662. Operations and Supply Chain Management (3)**

Prerequisite: Classified graduate standing.

Managerial concepts and quantitative methods associated with the design, execution, and management of operations and supply chain systems.

**B A 665. Financial Management I (3)**

Prerequisites: Business Administration 650 and 652.

Role of finance in firm, financial planning and control, management of working capital, time value of money, valuation, risk analysis, basic capital budgeting, long-term financing, international aspects of financial decisions.

### **B A 780. Field Studies in Business (1-3) Cr/NC**

Prerequisite: Completion of MBA core.

Application of business concepts to real world organizations. Students work under supervision of a faculty member to perform a project utilizing theories and principles from previous business coursework. Maximum credit six units.

### **B A 795. Integrative Business Analysis (3)**

Prerequisites: Advancement to candidacy and completion of MBA core.

Strategic case analysis of business problems and preparation for comprehensive examination for students in M.B.A. program under Plan B. Problem definition analysis and prioritization of solution mechanisms.

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

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

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

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

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

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

### **B A 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

## **Courses Acceptable on the Master of Business Administration Degree for Executives (B A)**

### **GRADUATE COURSES**

#### **B A 601. Organizational Behavior for Executives (3) (Offered only in Extension)**

Role of the manager in designing organizations for effectiveness with emphasis on organizational theory and organizational behavior.

#### **B A 602. Statistics for Business Decisions (3) (Offered only in Extension)**

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) (Offered only in Extension)**

Prerequisite: 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) (Offered only in Extension)**

Prerequisite: 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) (Offered only in Extension)**

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 615. Strategic Financial Management (3) (Offered only in Extension)**

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 665.

#### **B A 616. Competitive Analysis (3) (Offered only in Extension)**

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 653.

#### **B A 700. Business in the Global Environment (3) (Offered only in Extension)**

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) (Offered only in Extension)**

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) (Offered only in Extension)**

Role of the manager in dealing in a socially responsible and ethical manner with internal and external constituencies.

#### **B A 703. Strategic Management (3) (Offered only in Extension)**

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) (Offered only in Extension)**

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) (Offered only in Extension)**

Prerequisite: 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) (Offered only in Extension)**

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) (Offered only in Extension)**

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) (Offered only in Extension)**

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 790. Directed Readings in Business Administration (3) Cr/NC (Offered only in Extension)**

Preparation for the comprehensive examination for students in the M.B.A. for Executives program (Plan B).

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# Accountancy

In the Charles W. Lamden School of Accountancy  
In the College of Business Administration

**OFFICE: Student Services 2411**

**TELEPHONE: 619-594-5070**

**FAX: 619-594-3675**

**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., Professor of Accountancy,  
The Vern E. Odmark Chair in Accountancy (Graduate Adviser)  
Gary M. Grudnitski, Ph.D., Professor of Accountancy  
Nathan A. Oestreich, Ph.D., Professor of Accountancy  
Gerald E. Whittenburg, Ph.D., Professor of Accountancy  
(Graduate Adviser)  
Damon M. Fleming, 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  
Leon C. Chan, Ph.D., Assistant Professor of Accountancy  
Shana Clor-Proell, Ph.D., Assistant Professor of Accountancy  
David DeBoskey, Ph.D., Assistant Professor of Accountancy  
Steven L. Gill, Ph.D., Assistant Professor of Accountancy  
Kevin W. Hee, Ph.D., Assistant Professor of Accountancy  
Chad Proell, 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: accounting information systems, financial reporting, 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. The M.S. degree may also prepare students for a teaching career or admittance into a doctoral program.

## 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 the following courses or their equivalent:

B A 650	Financial Reporting and Analysis I (3)
B A 660	Managerial Accounting (3)
B A 651	Organizational Behavior (3)
B A 665	Financial Management I (3)
STAT 119	Elementary Statistics for Business (3)
B A 653	Managerial Economics (3) (or ECON 101 and ECON102)

Students also need 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. The seven year requirement may be waived by the School of Accountancy adviser.

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 Four of this bulletin.

## Specific Requirements for the Master of Science Degree in Accountancy

**(Major Code: 05021) (SIMS Code: 221909)**

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 Four 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 621, Accounting Information Systems; Accountancy 624, Taxation for Managers; Accountancy 625, Managerial and Financial Reporting and Analysis; and Accountancy 626, Auditing and Assurance Services, are required unless the student has 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.

## Accountancy

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The following specializations are available for the Master of Science degree in Accountancy:

Accounting Information Systems  
Financial Reporting  
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 "Requirements for the Master's Degree," in Part Four of this bulletin.

### BS/MS 4+1 Degree Program (BMACC)

The BS/MS 4+1 degree program (BMACC) is for students who plan to pursue professional accounting careers in public accounting firms, corporations, and not-for-profit and government organizations. Students must successfully complete 150 units to be awarded simultaneously the B.S. degree in Business Administration, Accounting, and the M.S. degree in Accountancy.

### Specific Requirements for the BS/MS 4+1 Degree Program (BMACC)

(Major Code: 05021) (SIMS Code: 221913)

Students must apply and be admitted to the BS/MS 4+1 degree program (BMACC). All students must have a satisfactory score on the Graduate Management Admissions Test, a minimum overall GPA of 3.0, a minimum SDSU GPA of 3.0, and a minimum upper division SDSU College of Business Administration GPA of 3.0. Students may apply for the program at several different points in their academic career: (1) after completing Accountancy 321 with a minimum grade of 3.0, (2) after completing Accountancy 321 and 322 with a minimum average GPA of 3.0 in these courses, or (3) after completing Accountancy 321, 322, 421 with a minimum average GPA of 3.0 in these courses.

Students attain graduate status when they have earned at least 120 units toward the completion of the BMACC program. No more than nine units may be in 500-level courses to meet the requirements of the master's program. At least 15 units of 500-, 600-, and 700-numbered courses must be in accountancy (to include Accountancy 522 and 790) and must include at least 12 units in courses numbered 650 and above (in special cases, nine units with adviser approval). Students must achieve at least a 3.0 average in the courses numbered 500 and above and specified on their official program for the 30 unit master's degree. Courses numbered 500 and above must be completed within seven years of the first course completed on the master's degree program. If for any reason a student does not satisfactorily complete the requirements for the Master of Science in Accountancy degree, they will be awarded the B.S. degree in Business Administration in Accounting, upon completion of the requirements for the B.S. degree.

### Courses Acceptable on Master's Degree Program in Accountancy (ACCTG)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs* sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

#### 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 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)

Prerequisite: Accountancy 421 or 626.

Skills and tools for auditors, consultants, tax professionals, managers. Techniques and technologies for fraud investigation and interviewing. Case analysis, research of public records, ethical decision-making for accountants. Service learning project.

##### ACCTG 508. Accounting for Not-For-Profit Organizations (3)

Prerequisite: Minimum grade of C in Accountancy 322. **Proof of completion of prerequisite required:** Copy of transcript.

Principles of fund accounting useful in state and local governmental units, hospitals, colleges, and universities. Comparisons with commercial accounting emphasized. Includes study of budgetary accounting, appropriations, encumbrances, internal checks and auditing procedures.

##### ACCTG 522. Current Issues in Accounting Practice and Theory (3)

Prerequisites: Management Information Systems 301, 390W; minimum grade of C in Accountancy 322 (or Accountancy 620 and 625). Credit or concurrent registration in Accountancy 421. **Proof of completion of prerequisite required:** Copy of transcript.

Accounting information for managerial performance evaluation, advanced financial reporting issues, and international accounting. Include material typically contained in International Accounting, Advanced Accounting, and Management Control Systems. (Formerly numbered Accountancy 422.)

##### ACCTG 575. Accounting Information Systems (AIS) Development (3)

Prerequisite: Accountancy 322 or 621 with grade of C or better.

AIS theories, databases, and internal controls in designing, maintaining, and enhancing business processes and systems. Hands-on experience to develop skills with EXCEL, ACCESS, and/or other integrated systems.

##### 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 Measurement and Reporting (3)

Prerequisite: Business Administration 650.

Measurement concepts and mechanics to translate global business transactions into principal financial statements using U.S. and international accounting standards. Revenue recognition, operating assets, investments, debt and equity financing, compensation, EPS, and cash flows.

##### ACCTG 621. Accounting Information Systems (3)

Prerequisite: Business Administration 650.

Application of accounting information systems to attain organizational objectives, improve planning and control at all levels of the organization. Systems analysis, design methodologies, tools, control frameworks and use of technologies in information systems.

##### ACCTG 624. Tax for Managers (3)

Prerequisite: Business Administration 650.

Application of federal income tax laws on selected management decisions (e.g., buy/lease decisions, sell/trade decisions, current and deferred compensation planning). Recognition of tax hazards and tax savings.

##### ACCTG 625. Managerial Analysis and Financial Reporting (3)

Prerequisites: Business Administration 650 and 660.

Measurement concepts and mechanics to translate business transactions into management and financial reporting information. Cost control and budgeting, inventory, operational assets, leases, deferred taxes, and strategic analysis.

**ACCTG 626. Auditing and Assurance Services (3)**

Prerequisites: Accountancy 620 and 621.

Duties, responsibilities, and ethics of the auditor; auditor's reports and procedures for evaluation of financial statements. Compilation and review standards for assurance services provided to non-public companies.

**ACCTG 650. Tax Research and Practice (3)**

Prerequisite: Accountancy 322, 503, or 624.

Tax research methodology; statutory, administrative, and judicial sources of tax law. Tax practitioner regulations, responsibilities, and ethics to include IRS Circular 230, AICPA Code of Conduct and Statements on Standards for Tax Services. Tax administration, sanctions, agreements, and disclosures.

**ACCTG 651. Seminar in Corporate Tax (3)**

Prerequisite: Credit or concurrent registration in Accountancy 650.

Corporate tax problems involving distributions, liquidations, reorganizations, redemptions, personal holding companies, accumulated earnings tax, and thin capitalization.

**ACCTG 654. Seminar in Partnership Taxation (3)**

Prerequisite: Credit or concurrent registration in Accountancy 650.

Partnership tax problems involving partnership formation, operations, distributions and liquidations.

**ACCTG 655. Tax Planning for Individuals (3)**

Prerequisite: Credit or concurrent registration in Accountancy 650.

Selected complex tax laws related to individuals and sole proprietorship businesses, sales and exchanges of property, tax deferred transactions in property, accounting periods and methods, and personal deductions.

**ACCTG 656. California and Multistate Taxation (3)**

Prerequisite: Credit or concurrent registration in Accountancy 650.

California taxation of individuals, corporations, and other business entities. Treatment of multistate transactions of business organizations and out-of-state transactions of California residents.

**ACCTG 659. Seminar in Taxation Topics (3)**

Prerequisite: Credit or concurrent registration in Accountancy 650.

Theoretical treatment of selected topics in taxation. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

**ACCTG 660. Seminar in Accounting Theory (3)**

Prerequisite: Accountancy 620.

Theories and concepts underlying global financial reporting. Professional research of authoritative pronouncements issued by the FASB, SEC, and other accounting regulators. Topics include accounting standards setting, measurement, market efficiency, disclosure, earnings quality, professional judgment.

**ACCTG 661. Seminar in International Accounting (3)**

Prerequisite: Business Administration 650.

Current financial reporting practices of business entities engaged in international activities; theories and concepts that underlie development of accounting standards to include cultural and professional dimensions, accounting clusters.

**ACCTG 663. Financial Statement Analysis (3)**

Prerequisite: Business Administration 650.

Illustrative cases and problems to analyze methods for communicating information about financing and operating activities of corporate firms, and techniques for evaluating the information.

**ACCTG 670. Seminar in Assurance Services (3)**

Prerequisite: Accountancy 421 or 626.

Selected conceptual issues in assurance services.

**ACCTG 671. Seminar in Compilation and Review Services (3)**

Prerequisite: Accountancy 421 or 626.

Applications cases on engagements to compile or review financial statements of nonpublic entities under accounting and review services standards.

**ACCTG 675. Seminar in Accounting Information Systems Audit and Control (3)**

Prerequisite: Accountancy 575 or Management Information Systems 687 with a grade of B or better.

Risk assessment and management in accounting systems, including impact on clients' business and audit functions, external and internal auditor issues, internal controls in computerized environments, issues related to Sarbanes-Oxley Act, and application of computer-assisted audit techniques (CAATs) using current audit software.

**ACCTG 680. Seminar in Managerial Accounting (3)**

Prerequisite: Business Administration 660.

Managerial cost accounting concepts and procedures, including budgetary planning, cost control, advisory functions, measurement of divisional profitability, product pricing, and investment decisions.

**ACCTG 681. Seminar in Regulatory and Management Controls (3)**

Prerequisite: Business Administration 650.

Social, ethical, and behavioral science theories influencing design and operation of corporate governance systems, topics include environmental and regulatory factors that influence, 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**

Prerequisite: Advancement to candidacy.

Preparation for the comprehensive examination for the M.S. program.

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

Prerequisite: Advancement to candidacy.

Research in the area of accountancy. Maximum credit six units applicable to a master's degree.

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

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

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

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# Finance

In the College of Business Administration

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

## Faculty

Mehdi Salehizadeh, 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)

Moon H. Song, Ph.D., Professor of Finance  
(Graduate Adviser)

Nikhil P. Varaiya, Ph.D., Professor of Finance

Russell L. Block, J.D., Associate Professor of Finance, Emeritus

Jaemin Kim, Ph.D., Associate Professor of Finance

Kuntara Pukthuanthong, Ph.D., Associate Professor of Finance

Xudong An, Ph.D., Assistant Professor of Finance

Paul J. Graf, J.D., Assistant Professor of Finance

Stefano Gubellini, Ph.D., Assistant Professor of Finance

Januj A. Juneja, Ph.D., Assistant Professor of Finance

Marie-Eve Lachance, Ph.D., Assistant Professor of Finance

Ning Tang, Ph.D., Assistant Professor of Finance

## Executive Financial Planner Advanced Certificate

(Offered through the College of Extended Studies)

The advanced certificate is intended for students who wish to provide advanced financial planning advice to individuals, families and partners. The program is intended for experienced financial, legal, or accounting professionals who enroll in the Executive Financial Planner Advanced Certificate Program. Offered jointly by the College of Business Administration and the College of Extended Studies, this advanced certificate is registered with the Certified Financial Planner Board of Standards, Inc., as a program intended to meet their education requirements to sit for the CFP® Certification Examination.

Applicants for any type of graduate study at San Diego State University must: (a) hold an acceptable baccalaureate degree earned at an institution accredited by a regional accrediting association, or the applicant has completed equivalent academic preparation as determined by the graduate dean; (b) have attained a grade point average of at least 2.85 in an acceptable earned baccalaureate degree, or at least 2.85 in the last 60 semester (90 quarter) units attempted, or hold an acceptable post-baccalaureate degree earned at an institution accredited by a regional accrediting association; (c) have been in good standing at the last institution attended. Applicants who do not qualify for admission under provisions (a) and (b) may be admitted by special action if the graduate dean determines that there is other academic or professional evidence sufficient to warrant such action. Applicants from foreign countries see International (Foreign) Student Admission Requirements.

Admission to the Executive Financial Planner Advanced Certificate program does not constitute admission to the master's degree programs of the College of Business Administration, which has additional requirements including qualifying scores on the Graduate Management Admissions Test (GMAT).

The advanced certificate requires 18 units; however, the program director may waive up to six units based upon prior coursework and professional credentials. Prerequisites can be waived by the instructor or program director, based upon a student's prior coursework and experience.

### Certificate Course Requirements (18 units)

ACCTG 503	Federal Taxation of Individuals (3)
FIN 522	Individual Insurance Management (3)
FIN 590	Personal Financial Planning Practicum (3)
FIN 651	Seminar in Investments (3)
FIN 657	Financial and Retirement Planning (3)
FIN 705	Estate Planning (3)

Students must earn a 3.0 average in these classes in order to earn the certificate. Classes with a grade below a "C" (2.0) may not be included. Students admitted to a master's program may use certificate credit toward a graduate degree in business (Master of Business Administration or Master of Science in Business Administration) with the permission of their graduate adviser.

The adviser for the certificate is Dr. Thomas M.D. Warschauer, Department of Finance. All course units may be used for business majors and concentrations where applicable and approved by the student's graduate adviser.

## Courses Acceptable on Master's Degree Programs in Business Administration (FIN)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### UPPER DIVISION COURSES

#### FIN 522. Individual Insurance Management (3)

Prerequisite: 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)

Prerequisite: 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 585. Estate Planning Issues and Practice (3)

Prerequisite: Undergraduate: Completion of lower division requirements for the major. Graduate: Completion of prerequisite core.

Tax and non-tax issues in establishment of a personal estate plan. Financial and non-financial goals and objectives. Not open to students with credit in Finance 445 or 705.

#### FIN 589. Personal Financial Planning (3)

Prerequisite: Finance 323.

Financial planning process including data gathering, cash flow and debt considerations. Retirement planning including social security. Education funding. Practice management considerations including establishment of ethical and legal client relationships.



**FIN 590. Personal Financial Planning Practicum (3)**

Prerequisite: Credit or concurrent registration in Finance 589 or 657.

Preparation of family financial plans using comprehensive cases and/or real financial data. Financial planning software. Counseling and communication skills, behavioral finance, client psychology, practice standards, discipline and ethics. Students may register once at the undergraduate level and may repeat with new content at the graduate level.

**FIN 596. Contemporary Topics in Finance (1-3)**

Prerequisites: Business major approved by the College of Business Administration and consent of instructor.

Contemporary topics in modern finance. May be repeated with new content. 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****FIN 604. Legal Environment for Executives (3)**

Legal environment of business, government regulation, social and ethical considerations in the administration of justice, substantive law of contracts, property, agency, and business organizations.

**FIN 617. Financial Management II (3)**

Prerequisite: Business Administration 665.

Develops topics to include asset pricing, capital budgeting techniques, dividend policy and financing decisions, applications of options and futures, term structure of interest rates, regulation of financial markets, leasing decisions, corporate control.

**FIN 641. Financing the Emerging Enterprise (3)**

Prerequisite: Business Administration 665.

Financial considerations in emerging and growing enterprises to include internal financial management, external funding sources, and dealing with venture capitalists. Emphasis on integration of theory, computer analysis, and human judgment in financial decision making.

**FIN 642. Financial Risk Management (3)**

Prerequisite: Business Administration 665.

Measurement and management of foreign exchange, interest rate, equity, and commodity risks. Risk assessment models, implementation strategies, risk management, and capital allocation. Using derivatives for risk management.

**FIN 651. Seminar in Investments (3)**

Prerequisite: Business Administration 665.

Characteristics of financial markets and instruments. Contemporary as well as traditional approaches to problems of pricing individual securities; portfolio selection and analysis; techniques of analysis; measurement of risk; return, and investment values.

**FIN 652. Seminar in Security Analysis and Portfolio Management (3)**

Prerequisite: An upper division or graduate course in investments.

Security valuation, alternative instruments, portfolio theory, active and passive management techniques, asset allocation, performance measurement, use of derivative instruments in portfolio management, debt portfolio management techniques, ethical standards.

**FIN 653. Case Studies in Financial Management (3)**

Prerequisite: Business Administration 665.

Applies theory of finance to practice of financial decision-making. Includes valuation, mergers, and restructurings. Integrates theory and managerial judgment in a decision-making context. Case study format.

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

Prerequisite: Business Administration 665.

International financial instruments, markets, and institutions; international trade and capital flows; foreign exchange risks and their management; direct and portfolio investment; implications for conduct of global business.

**FIN 656. Seminar in Financial Institutions (3)**

Prerequisite: Business Administration 665.

Change in financial institution management thought. Trends in asset management theory and liability management theory. Current events in financial institutions, changes likely to occur and proposed changes in laws and regulations.

**FIN 657. Financial and Retirement Planning (3)**

Prerequisite: Business Administration 665.

Decision-making process and theory of individual financial needs. Retirement planning including Social Security. Education planning. Financial strategies that aid in meeting family goals.

**FIN 659. Decision Making in the World Economy (3)**

Prerequisite: Classified graduate standing.

Application of macroeconomic theory to business decision making, study of economic environment and government macroeconomic policy from a business viewpoint.

**FIN 696. Seminar in Selected Topics (3)**

Intensive study in specific areas of finance. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**FIN 705. Seminar in Estate Planning (3)**

Prerequisite: Business Administration 665.

The scope and nature of estate planning. Identification and analysis of the environmental factors and those aspects of federal and state law affecting estate planning and taxation. Estate taxation and social policy.

**FIN 780. Seminar in Land Markets and Urban Development Issues (3)**

Prerequisite: Graduate standing.

Land use and policy issues affecting the spatial environments for enterprise decisions. Legal and institutional framework for basic land market functions and operations. Housing market demand and supply determinants. Development issues and models of urban land use.

**FIN 783. Seminar in Real Estate Investment and Development (3)**

Prerequisite: Graduate standing.

Analysis of real estate investment and development decisions by corporations, individuals and financial institutions. Market and feasibility analysis, taxation, financing and risk evaluation, portfolio considerations.

**FIN 784. Seminar in Real Estate Finance and Valuation (3)**

Prerequisite: Graduate standing.

Application of valuation theory to real property and related mortgage instruments in a market context. Market definition, data collection and analysis. Value determinants and new valuation technologies. Special valuation and financing issues and cases.

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

Prerequisite: Advancement to candidacy.

Research in the area of finance. Maximum credit six units applicable to a master's degree.

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

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

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

# Management

In the College of Business Administration

**OFFICE: Student Services 3356**

**TELEPHONE: 619-594-5306 / FAX: 619-594-3272**

## Faculty

Alex F. De Noble, Ph.D., Professor of Management,  
Chair of Department

Beth G. Chung-Herrera, Ph.D., Professor of Management

Lori V. Ryan, Ph.D., Professor of Management

Lynn M. Shore, Ph.D., Professor of Management

Gangaram Singh, Ph.D., Professor of Management and Associate  
Dean for Academic Affairs of the College of Business  
Administration

Chamundeswari Sundaramurthy, Ph.D., Professor of Management

Michelle A. Dean, Ph.D., Associate Professor of Management

Karen M. Ehrhart, Ph.D., Associate Professor of Management  
(Graduate Adviser)

Martina Musteen, Ph.D., Associate Professor of Management

Amy Randel, Ph.D., Associate Professor of Management

Lawrence C. Rhyne, Ph.D., Associate Professor of Management  
(Graduate Adviser)

John D. Francis, Ph.D., Assistant Professor of Management

Congcong Zheng, Ph.D., Assistant Professor of Management  
(Graduate Adviser)

## Courses Acceptable on Master's Degree Programs in Business Administration (MGT)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs* sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### UPPER DIVISION COURSE

#### **MGT 596. Advanced Topics in Management (3)**

Prerequisite: 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)**

Prerequisite: Business Administration 651.

Concepts and tools for studying structure of industries and processes of structural change in industries. Implications of public policy decisions and competitive actions on strategy formulation are explored in several industry settings.

#### **MGT 669. Human Resource Management (3)**

Prerequisite: 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 672. International Human Resource Management (3)**

Prerequisite: Business Administration 651.

Managing human resources in a global economy: theories, implementation, and evaluation of IHRM.

#### **MGT 696. Seminar in Selected Topics (3)**

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

Prerequisite: Business Administration 651.

Nature, dimensions and motives of international business. Impact of environmental factors. Nature of multinational corporation, importance of national and multilateral controls and policies for international business management.

#### **MGT 721. Seminar in Group Processes and Leadership (3)**

Prerequisite: Business Administration 651.

Perceptions and processes in work groups. Experience in interpersonal networks, influence and rewards, stereotypes; managing differences and conflicts.

#### **MGT 722. Seminar in Business Ethics and Social Institutions (3)**

Prerequisite: Business Administration 651.

Ethical and social aspects of current issues in business and society. Changing role of stakeholders including consumers, shareholders, and employees. Assessment of operation, functioning and regulation of the market system.

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

Prerequisite: Completion of MBA core or MS prerequisites.

Strategic decision making in managing international enterprises. General management problems in directing and controlling transnational companies, including entry, acquisitions and joint ventures. Cases and readings to acquaint students with worldwide business practices.

#### **MGT 724. Entrepreneurship (3)**

Prerequisite: Business Administration 651.

Examination of the entrepreneurial approach; concepts, theory and techniques of managerial innovation and implementation; analysis of entrepreneurial skills.

#### **MGT 725. Seminar in Negotiations (3)**

Prerequisite: Business Administration 651.

Negotiation principles with emphasis on international business contexts. Basic concepts, skills, and simulations of negotiation processes.

#### **MGT 729. Seminar in Organizational Issues (3)**

Prerequisite: Business Administration 651.

Issues in organizations in modern society: organization design, environmental interface, and political processes. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

#### **MGT 731. Seminar in Strategic Management of Technology and Innovation (3)**

Prerequisite: Completion of MBA core or MS prerequisites.

Assessment of technological competencies and formulation of entry strategies for high-technology markets. Managing project teams and high-technology professionals.

#### **MGT 743. Seminar in Business Plan Development (3)**

Prerequisite: Management 724.

Principles and techniques for developing a business plan.

#### **MGT 744. Seminar in Managing the Growing Firm (3)**

Prerequisite: MBA core or admission to degree curriculum for M.S. degree business administration.

Problems and issues confronting entrepreneurs beyond start-up of a new venture. Focus on issues from both entrepreneur and investor perspectives.

#### **MGT 745. Seminar in Corporate Entrepreneurship (3)**

Prerequisite: MBA core.

Challenges and issues confronting organizations seeking to pursue new business opportunities. Senior management charged with the mandate of pursuing new business opportunities and employees desiring to champion new ventures under corporate umbrella.

**MGT 746. Seminar in Corporate Governance (3)**

Prerequisite: Classified graduate standing.

Roles and interrelationships among members of corporate governance triad: managers, directors, and shareholders. History and theories of corporate governance, ethical obligations underlying the three roles, and case studies.

**MGT 747. Seminar in Managing Technology Commercialization (3)**

Prerequisite: Graduate standing.

Assessment of future commercialization potential of early stage technologies. Technology commercialization process including technology and market assessments, business models, revenue streams, licensing, and protection of intellectual property.

**MGT 748. Seminar in International Entrepreneurship (3)**

Prerequisite: Business Administration 651.

Challenges and issues confronting entrepreneurs seeking to pursue international business opportunities. Concepts, theory, and techniques of international entrepreneurship. Drivers of entrepreneurship and assessment of entrepreneurial conditions around the world.

**MGT 749. Family Business Management (3)**

Prerequisite: MBA core.

Issues uniquely related to management of a family business. Use of systems perspective on family business to deepen understanding of role requirements of family members to both business and family including succession planning.

**MGT 790. Directed Readings in Management (3) Cr/NC**

Prerequisite: Advancement to candidacy.

Preparation for the comprehensive examination for those students in the MSBA program under Plan B.

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

Prerequisite: Advancement to candidacy.

Research in the area of management. Maximum credit six units applicable to a master's degree.

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

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

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



# Management Information Systems

In the College of Business Administration

**OFFICE: Student Services 2411**

**TELEPHONE: 619-594-5316 / FAX: 619-594-3675**

## Faculty

Bruce A. Reinig, Ph.D., Professor of Management Information Systems, Chair of Department  
James R. Beatty, Ph.D., Professor of Management Information Systems  
Alexis Koster, Ph.D., Professor of Management Information Systems (Graduate Adviser)  
John M. Penrose, Ph.D., Professor of Management Information Systems  
Feraidoon Raafat, Ph.D., Professor of Management Information Systems (Graduate Adviser)  
Bongsik Shin, Ph.D., Professor of Management Information Systems (Graduate Adviser)  
Yeongling Helio Yang, Ph.D., Professor of Management Information Systems  
Theophilus Addo, Ph.D., Associate Professor of Management Information Systems  
Annette C. Easton, Ph.D., Associate Professor of Management Information Systems  
George K. Easton, Ph.D., Associate Professor of Management Information Systems  
Murray Jennex, Ph.D., Associate Professor of Management Information Systems  
Robert Plice, Ph.D., Associate Professor of Management Information Systems

## Master of Science Degree in Information Systems

### General Information

The objective of the Master of Science degree in information systems is to prepare students to take a senior position associated with the information systems field across all private industries and public sectors. With the broadening spectrum of the information systems field and subsequent rich set of career opportunities, there is an ongoing need to educate students so that they can take leadership positions in both established and emerging fields of information systems. To serve the student and industry needs effectively, the program is designed to balance management knowledge of business and technology, general technical knowledge in information systems, and domain knowledge in the special area selected by the student. Upon successful completion of the program, students will be competent in leading organizations in the evaluation and adoption of information systems and technologies for strategic advantage as well as in bridging the cultural and communication gaps that often exist between information systems and business function professionals.

### Admission to the Degree Curriculum

In addition to meeting the requirements for classified graduate standing and the general requirements for master's degrees as described in Part Two of this bulletin, the student must have satisfactorily completed equivalents of the following courses as prerequisites:

MIS 180	Principles of Information Systems (3)
MIS 315	Business Application Programming (3)
B A 650	Financial Reporting and Analysis I (3)
B A 655	Marketing (3)
B A 662	Operations and Supply Chain Management (3)

Notice of admission 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.

### Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Four of this bulletin.

Students concurrently enrolled in deficiency coursework may be given permission to take the comprehensive examination 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 Information Systems

**(Major Code: 07021)**

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 Four of this bulletin, the student must complete a graduate program of at least 36 approved units including at least 27 units in 600- and 700-numbered courses. Up to nine units of coursework may be accepted as transfer credit. Not more than a total of three units in courses Business Administration 799A, Thesis, and Management Information Systems 798, Special Study, may be accepted for credit toward the degree. With approval of the graduate adviser, a substitute course may be allowed in place of a required course after reviewing student credentials.

#### Required core courses:

##### IS Technology (15 units)

MIS 686	Database Management Systems (3)
MIS 687	Data Communications and Distributed Data Processing (3)
MIS 695	Information Systems Development I (3)
MIS 697	Information Systems Development II (3)
MIS 752	Seminar in Supply Chain Planning and Control (3)

##### IS Management (12 units)

MIS 688	Information Systems in Organizations (3)
MIS 750	Project Management (3)
MIS 755	Information Systems Security Management (3)
MIS 790	Directed Readings in Management Information Systems (3) Cr/NC

#### OR

MIS 797	Research (3) Cr/NC/RP
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##### Career Track (9 units)

Students select a career track and courses with the approval of the graduate adviser.

The Master of Science in information systems requires Plan A, Thesis or Plan B, a directed readings in information systems or a written comprehensive examination offered by the 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 Four of this bulletin.

## Courses Acceptable on Master's Degree Programs in Business Administration (MIS)

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### UPPER DIVISION COURSES

#### MIS 515. Intermediate Programming for Business Applications (3)

Prerequisite: Management Information 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. (Formerly numbered Information and Decision Systems 515.)

#### MIS 520. Advanced Programming for Business Applications (3)

Prerequisite: Management Information 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. (Formerly numbered Information and Decision Systems 520.)

### GRADUATE COURSES

#### MIS 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. (Formerly numbered Information and Decision Systems 609.)

#### MIS 610. Electronic Business Technologies (3)

Prerequisite: Classified graduate standing.

Basic concepts of e-business technologies. Development tools, languages, processes, and methodologies for electronic business applications. (Formerly numbered Information and Decision Systems 610.)

#### MIS 620. Electronic Business Infrastructures (3)

Prerequisite: Management Information Systems 610.

Advanced information technology concepts associated with e-business and e-commerce infrastructure and systems architecture. (Formerly numbered Information and Decision Systems 620.)

#### MIS 630. IT Management Strategies for E-Business (3)

Prerequisite: Management Information Systems 620.

Analysis and application of strategic information technology management initiatives, designs, and architectures for attaining an organization's e-business goals. (Formerly numbered Information and Decision Systems 630.)

#### MIS 680. Information Systems Hardware and Software (3)

Prerequisite: Classified graduate standing.

Computer architecture, programming languages, programming systems, and operating systems. (Formerly numbered Information and Decision Systems 680.)

#### MIS 686. Database Management Systems (3)

Prerequisite: Classified graduate standing.

Applications of database management systems in business. Design and administration of database processing systems applications. (Formerly numbered Information and Decision Systems 686.)

#### MIS 687. Data Communications and Distributed Data Processing (3)

Prerequisite: 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. (Formerly numbered Information and Decision Systems 687.)

#### MIS 688. Information Systems in Organizations (3)

Prerequisite: Classified graduate standing.

Evolutionary role of information systems: from support function to strategic entity, planning, organizing, and administering the information systems function. Information and its relationships to business decision making. Global and ethical aspects of information technology. (Formerly numbered Information and Decision Systems 688.)

#### MIS 691. Decision Support Systems (3)

Prerequisite: Completion of MBA core or MS prerequisites.

Design, implementation, and integration of computerized decision support systems into business management. Problem representation, modeling, and simulation. (Formerly numbered Information and Decision Systems 691.)

#### MIS 695. Information Systems Development I (3)

Prerequisite: 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. (Formerly numbered Information and Decision Systems 695.)

#### MIS 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.

#### MIS 697. Information Systems Development II (3)

Prerequisite: Management Information 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. (Formerly numbered Information and Decision Systems 697.)

#### MIS 705. Communication Strategies (3)

Prerequisite: Classified graduate standing.

Development of advanced written, oral, and interpersonal communication strategies for the business environment. (Formerly numbered Information and Decision Systems 705.)

#### MIS 744. Seminar in Lean Six Sigma and Baldrige Quality Management (3)

Prerequisite: Business Administration 662.

Applications of lean principles, Six Sigma methodology, and Baldrige processes for business quality, agility, improvement. Advanced concepts, methods, lean tools, statistical quality tools for process improvement. (Formerly numbered Information and Decision Systems 744.)

#### MIS 748. Seminar in Applied Multivariate Analytics (3)

Prerequisite: Business Administration 652.

Applications of various statistical techniques and design of experiments for business. Advanced ANOVA and Taguchi designs, multiple regression modeling methodologies, and multivariate techniques, such as factor analysis, judgment analysis, multiple discriminant analysis, multivariate analysis of variance, and canonical correlation. (Formerly numbered Information and Decision Systems 748.)

#### MIS 749. Seminar in Applied Behavioral Measurement (3)

Prerequisite: Business Administration 652.

Measurement procedures useful in analyzing such areas as teamwork, leadership, job satisfaction, attitudes, motivation, total quality management, and customer satisfaction. Development and use of technologies including Likert, Thurstone, Guttman, paired-comparison, forced-choice, semantic-differential, C-E diagrams, and review of existing instruments used in business-related settings. (Formerly numbered Information and Decision Systems 749.)

## Management Information Systems

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### **MIS 750. Project Management (3)**

Prerequisite: Business Administration 662.

Managing projects. Includes network modeling, defining activities and events, cost estimating and reporting, single and multiple resource allocation and leveling. Computerized project management software will be used. (Formerly numbered Information and Decision Systems 750.)

### **MIS 752. Seminar in Supply Chain Planning and Control (3)**

Prerequisite: 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. (Formerly numbered Information and Decision Systems 752.)

### **MIS 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. (Formerly numbered Information and Decision Systems 753.)

### **MIS 754. Seminar in Operations Strategy (3)**

Prerequisite: Business Administration 662.

Strategic issues in operations and their integration with other functional areas. Includes operations strategy, product and process planning, experience curves, productivity measurements, and information technology implementation. (Formerly numbered Information and Decision Systems 754.)

### **MIS 755. Information Systems Security Management (3)**

Prerequisite: 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. (Formerly numbered Information and Decision Systems 755.)

### **MIS 790. Directed Readings in Management Information Systems (3) Cr/NC**

Prerequisite: Advancement to candidacy.

Preparation for the comprehensive examination for students. (Formerly numbered Information and Decision Systems 790.)

### **MIS 797. Research (3) Cr/NC/RP**

Prerequisite: Advancement to candidacy.

Research in the area of management information systems. Maximum credit six units applicable to a master's degree.

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

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

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

For additional courses applicable to the Master of Science degree in Information Systems see: Business Administration 652. Statistical Analysis
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# Marketing

In the College of Business Administration

**OFFICE: Student Services 3356**  
**TELEPHONE: 619-594-5317 / FAX: 619-594-3272**

## Faculty

George E. Belch, Ph.D., Professor of Marketing,  
Chair of Department  
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  
(International Business Graduate Adviser)  
Pradeep K. Tyagi, Ph.D., Professor of Marketing  
(MBA Graduate Adviser)  
Heather L. Honea, Ph.D., Associate Professor of Marketing  
Paula Peter, Ph.D., Assistant Professor of Marketing

## Courses Acceptable on Master's Degree Programs in Business Administration (MKTG)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### 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)**

Prerequisite: Business Administration 655.

Analysis and planning of marketing programs. Emphasis on quantitative assessment, market measurement and forecasting, budgeting, organization and development of marketing strategy. Integration of marketing programs concerning product plans, pricing, promotion and distribution.

#### **MKTG 729. Contemporary Issues in Marketing Theory and Practice (3)**

Prerequisite: 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)**

Prerequisite: Business Administration 655.

The study of consumer behavior in relation to marketing strategy and the changing environment of business.

#### **MKTG 761. Product Innovation Management (3)**

Prerequisite: Business Administration 655.

New product development and issues related to overall management of product innovation in context of entrepreneurial opportunity, start-up ventures and existing organizations. Focus on planning, design, and implementation of marketing strategy.

#### **MKTG 762. Seminar in Integrated Marketing Communication (3)**

Prerequisite: Business Administration 655.

Theory and application of integrated marketing communication to advertising, promotions, public relations/publicity, personal selling and direct marketing (including Internet).

#### **MKTG 763. Seminar in Sales Management (3)**

Prerequisite: Business Administration 655.

Sales management and personal selling decisions and strategies in business organizations.

#### **MKTG 766. Seminar in Marketing Research (3)**

Prerequisite: Business Administration 652 and 655.

Research methods and analysis for consumer and business marketing. Research design and implementation, use of secondary data sources, qualitative research, survey research, experimentation, and data analysis using statistical software, such as SPSS.

#### **MKTG 767. Seminar in Business Marketing Management (3)**

Prerequisite: Business Administration 655.

Management of marketing decisions particular to organizational customers and prospects. Emphasizes marketing to private, commercial, institutional, and governmental customers in both domestic and global markets.

#### **MKTG 768. Seminar in Internet Marketing and E-Business (3)**

Prerequisite: Business Administration 655.

Theory and application of marketing utilizing the Internet and associated issues of electronic commerce.

#### **MKTG 769. Seminar in International Marketing (3)**

Prerequisite: Business Administration 655.

The impact of cultural, social, political, economic, and other environmental variables on international marketing systems and the decision-making process of multinational marketing operations.

#### **MKTG 770. Marketing of Technology (3)**

Prerequisite: Business Administration 655.

Marketing of high-technology products in fast-paced business environments. Concepts and practices related to development of marketing strategies and programs for technology including product, pricing, channel, and communications strategies. Technological innovations and marketing implications.

#### **MKTG 772. Strategic Brand Management (3)**

Prerequisite: Business Administration 655.

Planning, managing, and evaluating brand strategies. Theories, models, concepts, and techniques used to build, measure, and manage brand equity. Marketing decisions faced by an organization in managing brands for long-term profitability.

#### **MKTG 779. Advanced Marketing Strategy (3)**

Prerequisites: Business Administration 655 and advancement to candidacy.

Development, implementation and evaluation of marketing strategy and planning. Role of marketing planning in overall corporate strategic planning process. Use of contemporary techniques and models in strategic planning process.

#### **MKTG 790. Directed Readings in Marketing (3) Cr/NC**

Prerequisite: Advancement to candidacy.

Preparation for the comprehensive examination for those students in the MSBA program under Plan B. Special valuation and financing issues and cases.

#### **MKTG 797. Research (3) Cr/NC/RP**

Prerequisite: Advancement to candidacy.

Research in the area of marketing. Maximum credit six units applicable to a master's degree.

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

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

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

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# Chemistry

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

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

**TELEPHONE: 619-594-5595 / FAX: 619-594-4634**

**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  
Andrew L. Cooksy, Ph.D., Professor of Chemistry and Biochemistry  
Douglas B. Grotjahn, Ph.D., Professor of Chemistry and Biochemistry  
(Graduate Admissions Adviser)  
Shelli R. McAlpine, Ph.D., Professor of Chemistry and Biochemistry  
William E. Stumph, Ph.D., Professor of Chemistry and Biochemistry  
William G. Tong, Ph.D., Distinguished 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)  
Tom Huxford, Ph.D., Associate Professor of Chemistry and  
Biochemistry  
John J. Love, 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  
Peter van der Geer, 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  
Gregory Kalyuzhny, 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. Graduate teaching associateships can be valuable for applicable degree programs, preparing students for a teaching career. Application blanks and additional information may be secured from the Department of Chemistry and Biochemistry Web site at <http://www.chemistry.sdsu.edu/graduate/forms/>.

## 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) English language 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) Departmental Graduate Program Application form. 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 Four 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) (SIMS Code: 772602)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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 Four of this bulletin. A written comprehensive examination is required.

### Specific Requirements for the Master of Science Degree

**(Major Code: 19051) (SIMS Code: 772601)**

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 Four 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) (SIMS Code: 772603)**

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 Four 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

### Courses Acceptable on Master's and Doctoral Degree Programs in Chemistry (CHEM)

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

#### UPPER DIVISION COURSES (Also Acceptable for Advanced Degrees)

##### **CHEM 510. Advanced Physical Chemistry (3)**

Prerequisite: Chemistry 410B.

Problems in chemical thermodynamics, statistical mechanics, chemical kinetics, quantum chemistry and molecular structure and spectroscopy, with applications.

##### **CHEM 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 432, 432L.

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 432, 432L, 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 232, 232L, 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)**

Prerequisite: Chemistry 550.

Expanded treatment of instrumental methods for separation and quantification not covered in Chemistry 550. Non-instrumental separations, quantitative organic microanalysis, sampling theory and techniques, reaction rate applications and interpretation of experimental data.

##### **CHEM 560. General Biochemistry (3)**

Prerequisites: Chemistry 232, 232L, and credit or concurrent registration in Chemistry 410A, 432, 432L.

The structure, function, metabolism, and thermodynamic relationships of chemical entities in living systems. Not open to students with credit in Chemistry 365. (Formerly numbered Chemistry 560A.)

##### **CHEM 562. Intermediary Metabolism (2)**

Prerequisite: Chemistry 365 or 560.

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)**

Prerequisite: Chemistry 365 or 560.

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)**

Prerequisite: Chemistry 365 or 560.

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.

Prerequisite: 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 232, 232L, 251; consent of instructor for all other majors.

Fundamentals of chemistry applied to environmental problems. Chemistry of ecosystems; analysis of natural constituents and pollutants; sampling methods; transport of contaminants; regulations and public policy.

##### **CHEM 596. Advanced Special Topics in Chemistry (1-3)**

Prerequisite: Consent of instructor.

Advanced selected topics in modern chemistry. May be repeated with new content. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

#### GRADUATE COURSES

##### **CHEM 695. Graduate Education in Chemistry (3)**

Prerequisite: Concurrent registration in chemistry course at 500-level or higher.

Skills and knowledge needed for success in chemistry graduate program to include techniques for successful teaching, key safety protocols, ethical issues in teaching and research, department research programs, effective means of finding and communicating chemical information.

##### **CHEM 711. Chemical Thermodynamics (3)**

Prerequisite: Chemistry 410B.

Chemical thermodynamics and an introduction to statistical thermodynamics.

##### **CHEM 712. Chemical Kinetics (3)**

Prerequisite: Chemistry 410B.

Theory of rate processes; applications of kinetics to the study of reaction mechanisms.

##### **CHEM 713. Quantum Chemistry (3)**

Prerequisite: Chemistry 410B.

Quantum mechanics of atomic and molecular systems; applications to chemical bonding theory.

##### **CHEM 730. Advanced Topics in Organic Chemistry (1-3)**

Prerequisites: Chemistry 432, 432L.

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, 432, 432L.

Reactivity and mechanism in organic reactions.

**CHEM 750. Advanced Topics in Analytical Chemistry (1-3)**

Prerequisite: Chemistry 550.

Selected topics from the field of analytical chemistry. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.**CHEM 751. Separations Science (3)**

Prerequisites: Chemistry 550 and 711.

Theoretical bases for separation techniques important in analytical chemistry. Chemical and physical interactions between components of different classes of separation systems, including selection and optimization of operational parameters.

**CHEM 752. Mass Spectrometry (3)**

Prerequisites: Chemistry 410B and 550.

Theory and practice in analysis of volatile and involatile organic and inorganic compounds, basic design principles, theory of ionization processes; interpretation of mass spectra.

**CHEM 753. Analytical Spectroscopy (3)**

Prerequisite: Chemistry 550.

Theory and application of atomic and molecular absorption, emission and fluorescence methods. Modern optical instrumentation and methods of analysis. Nonlinear laser spectroscopic methods in chemical analysis.

**CHEM 763. Cellular Regulation (2)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: Consent of graduate adviser.

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 795. Chemistry Seminar (1)**

Prerequisite: Graduate standing.

Advanced study in all fields of chemistry. Maximum credit three units applicable to the master's degree or Ph.D. in chemistry.

**CHEM 797. Research (1-3) Cr/NC/RP**

Prerequisite: Consent of instructor.

Research in one of the fields of chemistry. Maximum credit six units applicable to a master's degree.

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

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

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

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

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**

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

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

**DOCTORAL COURSES****CHEM 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Independent investigation in the general field of the dissertation.

**CHEM 899. Doctoral Dissertation (1-15) Cr/NC/RP**

Prerequisites: An officially constituted dissertation committee and advancement to candidacy.

Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.

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# 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

Norma V. Iglesias Prieto, Ph.D., Professor of Chicana and Chicano Studies, Chair of Department (Graduate Adviser)  
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  
Adelaida R. Del Castillo, Ph.D., Associate Professor of Chicana and Chicano Studies  
María de la Luz Ibarra, 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. A master's degree in Chicana and Chicano Studies at San Diego State University prepares students for a professional career in teaching by providing students with university-level teaching experience and access to community college teaching positions.

## 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) English language 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 Four of this bulletin.

## Specific Requirements for the Master of Arts Degree

**(Major Code: 22131) (SIMS Code: 114910)**

In addition to meeting the requirements for the Master of Arts degree, as described in Part Four 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.

## **Courses Acceptable on Master's Degree Program in Chicana and Chicano Studies (CCS)**

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### **UPPER DIVISION COURSES**

#### **CCS 525. Race in Mexico: From Conquest to the Revolution (3) (Same course as Latin American Studies 525)**

Prerequisite: Upper division or graduate standing.

Ways race and racial identities have been constructed in Mexico from early 1500s through 1940. Caste system, ideologies of mestizaje and indigenismo and their impact on revolutionary nationalism.

#### **CCS 554. United States-Mexico Transborder Populations and Globalization (3) (Same course as Sociology 554)**

Prerequisite: 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 and consent of instructor.

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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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**

Prerequisite: 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**

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

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

#### **CCS 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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# 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: [cfdev@mail.sdsu.edu](mailto:cfdev@mail.sdsu.edu)**

## Faculty

\*Shulamit N. Ritblatt, Ph.D., Associate Professor of Child and Family Development, Chair of Department (Graduate Adviser)

\*Thomas W. Roberts, Ph.D., Professor of Child and Family Development

\*Audrey Hokoda, Ph.D., Associate Professor of Child and Family Development

\*Sascha Kay, Ph.D., Assistant 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., Distinguished Professor of Public Health

Vanessa L. Malcarne, Ph.D., Professor of Psychology

Gerald Monk, Ph.D., Professor of Counseling and School Psychology

Joseph M. Price, Ph.D., Professor of Psychology

Judy S. Reilly, Ph.D., Professor of Psychology

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

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 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. Shulamit N. Ritblatt.

## General Information

The Department of Child and Family Development offers interdisciplinary graduate study leading to the Master of Science degree in child development. Graduate teaching associateships and graduate assistantships in child development may be available to a limited number of qualified students.

## Master of Science Degree in Child Development

The Master of Science degree in child development is one of only four child development programs available in the CSU. With 101 community college child development programs in California and 17 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. The Department of Child and Family Development plays a leadership role in integration of curricula for community colleges and the CSU.<sup>1</sup>

Child development is an interdisciplinary area of study. The Master of Science degree, administered by the faculty from 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. The focus of the

department is on the study of social emotional development as the underlying foundation for all other areas of development including physical, cognitive, motor and language. The program represents an interdisciplinary field of study with a basic assumption that development takes place across the lifespan in the context of the family, community, and public policy. The department's emphasis on primary prevention prepares students with hands-on experiences through community-based learning.

The focus of the program is on the early years and prevention with an emphasis on parent-child intergenerational relationships to enhance school readiness and preparation of teachers to work with families with a focus on socio-emotional and behavior support in educational settings and homes. Faculty areas of study include attachment, socio-emotional development and school readiness, continuity of care, child abuse and relationship violence, intergenerational relationships, and parent education and involvement in education. Faculty work in collaboration with community agencies and programs are to include but are not limited to: SDSU Children's Center, Head Start, First 5, San Diego Unified School District, San Diego County Office of Education, San Diego County Health and Human Services—Office of Violence Prevention, San Diego County Health and Human Services Child and Adolescent Services, Children Mental Health Services, YMCA, Exceptional Family Resource Center, Home Start, among others. Students can choose a research project or thesis. In addition to the thesis, there are projects on agencies and programs in the community. Students will have the opportunity to develop projects in the community and implement best practices of continuity of care, intergenerational programs, etc.

Graduates with the Master of Science (but without the certificate), and graduates with the certificate qualify for administrator, coordinator, or service provider positions in preschools, day care centers, schools, hospitals, hospice centers, public welfare agencies, family service agencies, family planning clinics, community programs, business and industry, and government agencies. Graduates with the EC-SEBRIS certificate also qualify for positions related to early childhood mental health and behavioral health. Graduates from the Master of Science program also qualify as community college instructors and can continue their education for the doctoral degree in human development or a related field.

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<sup>1</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. All students must satisfy the general requirements for admission to the university with graduate standing as described in Part Two of this bulletin. 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. In addition, a student applying for admission to the graduate program in child development, including those who hold the EC-SEBRIS certificate, must meet the following graduate admission requirements.

To qualify for admission to the master's program in child development, the student must have:

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 31-32 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 corresponding admissions materials separately to SDSU Graduate Admissions and to the Department of Child and Family Development.

#### **Graduate Admissions**

The following materials should be mailed or delivered 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.
- Students with international coursework must submit an evaluation report to be considered for admission. Evaluation reports must be detailed, course-by-course evaluations with equivalent US credits and grades. Once completed, the detailed evaluation report should be sent directly to the Graduate Admissions office. SDSU recommends the following evaluation services:

#### **Course-by-Course Evaluation Report**

Educational Credential Evaluators, Inc.  
P.O. Box 514070  
Milwaukee, WI 53203-3470  
414-289-3400

#### **Detail Evaluation Report**

International Education Research Foundation, Inc.  
P.O. Box 3665  
Culver City, CA 90231  
310-258-9451

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

The following materials should be mailed or delivered directly to:

Department of Child and Family Development  
Attention: Dr. Shulamit N. Ritblatt, 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 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.

## **Advancement to Candidacy**

All students must satisfy the general requirements for advancement to candidacy, as described in Part Four 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) (SIMS Code: 330909)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, students must complete a graduate program of 31-32 units, to include at least 22 units of 600- and 700-numbered courses.

Students pursuing only the Master of Science degree in child development must complete:

1. A core sequence of five courses to include Child and Family Development 634, 660 (four units required), 670, 790, and Education 690 (16 units).
2. A three unit graduate course selected in conjunction with the program adviser.
3. Nine units of any 500-level child and family development courses. (Graduate students who are alumni of the child and development program and received their Bachelor of Science 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).

**NOTE:** Students who have completed or are concurrently pursuing the EC-SEBRIS certificate will have earned 18 units towards the Master of Science in child development and need to complete 14 additional units: Child and Family Development 634, 660 (1 unit per semester for total of 2 units), Education 690, Child and Family Development 790, and 799A (Plan A) or 798 (Plan B).

## **Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRIS) Certificate**

The certificate program in Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRIS) is an interdisciplinary program focusing on professional preparation and skills enhancement of early childhood educators who work with young children who demonstrate socio-emotional and behavioral problems and their parents.

Eighteen program units are required to earn the certificate in Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRIS). Twelve units of seminar courses addressing core knowledge foundations and six units of practicum/field experience. Courses in the certificate program may be applied to the master's degree in child development if applicable.

Prerequisites for admission:

1. Successful completion of a bachelor's degree in a field related to child development, psychology, social work, human development, school counseling, or social services from an accredited institution, and relevant work experience in the early childhood education field.
2. Successful completion of the application and interview process.
3. Coursework relating to: early years of development, parenting, family functioning and parent-child relationships, children with special needs, and theories in socio emotional development. If students' undergraduate preparation is deemed insufficient, students will be required to complete specified courses as determined by the certificate program's adviser.
4. Recommendation of employer and/or director of certificate program.

## Child and Family Development

Course requirements (18 units). The EC-SEBRIS certificate is modeled following the Delivery of Infant-Family and Early Mental Health Services Revised Training Guidelines and Personnel Competencies proposed by the California's Infant, Preschool and Family Mental Health Initiative (Workforce 2010). It includes two main areas: knowledge and experience. The knowledge base is comprised of four foundation classes. Two practicum courses that include clinical experience/supervision in early childhood setting and programs accompanied by Reflective Practice Facilitation (total of 500 hours of supervised practicum).

Students must complete the course requirements with a minimum 3.0 (B) grade point average.

### Knowledge Area (12 units):

- CFD 670 Seminar in Child Development Theories – Intervention and Prevention (3)
- CFD 671 Seminar in Human Development: Positive Behavior Support for Young Children with Challenging Behavior (3)
- CSP 623 Ecobehavioral Assessment – Intervention (3)
- SPED 676 Advanced Applied Behavior Analysis (3)

### Experience Area – Field Experience/Practicum (6 units):

- CFD 697 Advanced Field Experiences Cr/NC (3 units each semester; 500 hours of supervised practicum to include 50 hours of group supervision, 30 hours of one-on-one, and 6 to 10 hours of on-site coaching).

For further information, contact the program adviser, Dr. Shulamit N. Ritblatt.

## Courses Acceptable on Master's Degree Program in Child Development (CFD)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### 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, 475, 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 565. Best Practices of Care for Infants/Toddlers (3)

Prerequisites: Consent of instructor and completion of all lower division preparation for the major courses with a grade of C (2.0) or better. **Proof of completion of prerequisites required:** Copy of transcript.

Best practices of care for infants and toddlers to include respectful, attentive physical care, its basic principles and the practical components of best practices of care for young children. Design environments of care that ensure safety and optimum growth and development in collaboration with families via meaningful connections between child care and child's home and culture.

#### 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.

Ethical guidelines and other standards related to child and family development. Informed advocates for equitable educational practices and policies.

#### CFD 577. Professionalism and Advanced Administration of Child Development Programs (3)

Prerequisite: Child and Family Development 477. **Proof of completion of prerequisite required:** Copy of transcript.

Problem analysis and development of successful organizational strategies for child development program delivery. Leadership, effective communication, social and ethical issues from a multicultural perspective.

#### CFD 578. Conflict Resolution Across the Life Span (4)

Three lectures and three hours of laboratory.

Prerequisites: Child and Family Development 335, 370, 375A, 375B, 375C, 475, 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, Child and Family Development 353A, 353B, 353C, 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 etiology, development, and adjustment of emotional, psychological, and physical disorders. Directed experience with special needs individuals and their families with focus on inclusion.

#### CFD 596. Advanced Studies in Child and Family Development (1-6)

Prerequisite: Nine upper division units in child and family development.

Advanced study of selected topics. May be repeated with new content. 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.

#### CFD 597. Field Experience in Child and Family Development Programs (3) Cr/NC

Prerequisites: Completion of five child and family development 500-level courses with a grade of C (2.0) or better in each course. **Proof of completion of prerequisites required:** Copy of transcript.

Work experience in child and family development. Application of theoretical and evidence-base information with reflective supervision from faculty and field supervisor. Development of professional identity and career goals.

#### CFD 598. Reflective Learning Portfolio (1) Cr/NC

Two hours of activity.

Prerequisite: Senior standing. Limited to child development majors. Major code: 08231.

Capstone course to mentor child development majors to integrate knowledge acquired throughout child and family development program. Create portfolio and reflective essay.



**GRADUATE COURSES**

**CFD 634. Seminar in Family Processes (3)**

Prerequisite: Child and Family Development 335.

Analysis of selected research in family structure, development, and crisis.

**CFD 660. Seminar in Current Issues and Trends in Child Development (1) Cr/NC**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: Six upper division units in child and family development.

Analysis of selected research in human development. May be repeated with new content for maximum credit six units.

**CFD 697. Advanced Field Experiences (3) Cr/NC**

Prerequisite: Child and Family Development 670 or 671.

Advanced application of human developmental theories and techniques in various community settings. Maximum credit six units.

**CFD 790. Research Methods and Program Development (3)**

Prerequisite: 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**

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

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

**CFD 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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# 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

Louis M. Rea, Ph.D., Professor of Public Affairs, Interim Director of School (M.P.A. Graduate Coordinator)  
Roger W. Caves, Ph.D., Professor of Public Affairs  
Lawrence A. Herzog, Ph.D., Professor of Public Affairs (Graduate Coordinator)  
Sherry Ryan, Ph.D., Associate Professor of Public Affairs  
Maurizio Antoninetti, Ph.D., Assistant 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. 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) English language 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 March 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 Four 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 study 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. C P 625 Quantitative Techniques in Urban Planning (3)  
C P 630 Seminar in Urban Planning Implementation (3)  
C P 640 Seminar in Urban Planning Theory (3)  
C P 660 City Planning and Geographic Information Systems Applications (3)  
C P 670 History of Urban Planning (3)  
C P 675 Seminar in Environmental Policy and Planning (3)  
C P 690 Seminar in Land Use Planning Principles and Techniques (3)  
C P 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. C P 796 Internship in Urban Planning (3-6) Cr/NC
4. P A 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.

## Courses Acceptable on Master's Degree Program in City Planning (C P)

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### GRADUATE COURSES

#### C P 625. Quantitative Techniques in Urban Planning (3)

Prerequisite: Public Administration 604.

Advanced techniques for analyzing problems in city planning; emphasis on computer applications.

#### 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)

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 675. Seminar in Environmental Policy and Planning (3)

Theoretical elements of environmental policy, sustainability; application to urban planning. Green site planning, urban design, and transportation policy.

#### C P 690. Seminar in Land Use Planning Principles and Techniques (3)

Two lectures and three hours of laboratory.

Prerequisite: City Planning 660.

Land-use and physical planning principles and techniques at the regional, community, specific and subdivision planning levels.

#### C P 700. Urban Design and Land Use Planning Studio (6)

One lecture and ten hours of laboratory.

Prerequisite: City Planning 690.

Preparation of land-use plans and planning reports at the regional, community and subdivision levels.

#### C P 710. Seminar in Theories of Urban Design (3)

Perspectives and methodologies of contemporary urban design and its contribution toward improving the quality of the physical, social and economic environment.

#### C P 720. Seminar in Land Use and Environmental Law (3)

Cases and studies in zoning, coastal planning, growth management and environmental assessment.

#### C P 730. Seminar in Urban Transportation Planning (3)

Issues, techniques and practices in urban transportation planning with general emphasis on interrelations between transportation and land use planning.

#### C P 796. Internship in Urban Planning (3-6) 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

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

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

#### C P 799C. Comprehensive Examination Extension (0) Cr/NC

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

For additional courses applicable to the Master of City Planning degree see:  
Public Administration 525. The U.S. City Planning Process

## Civil Construction and Environmental Engineering

Refer to "Engineering" in this section of the bulletin.

# 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

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

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

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

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

Valerie R. Renegar, Ph.D., Associate Professor of Communication  
(Graduate Adviser)

Carmen M. Lee, 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 the following areas:

- Mastery of knowledge and abilities in communication theory and practice;
- Completion of major project that prepares 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;
- Preparation for a teaching career.

## 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.

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 admits students only in the fall semester. Application packages must be received and completed by previous 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 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) English language 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, English language 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

- Indicate that you applied online, paid your fee, and submitted official transcripts and scores to Graduate Admissions;
- Indicate if you are applying for a Graduate Teaching Associate (GTA) position and describe 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 English language 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) (SIMS Code: 661129)

In addition to meeting the requirements for the Master of Arts degree as described in Part Four 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 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 Communication 601 with a grade of B or better; six units selected from Communication 610, 620, 640, 660; 12 units selected from Communication 610, 620, 640, 660, 665, 696, 705, 706, 707, 715, 721, 735, 740, 745, 750, 751, 752, 755, 771, 783, 786, 792, 798; and six units selected with the approval of the graduate adviser. No more than six units may be taken as special study (Communication 798).

## Courses Acceptable on Master's Degree Programs in Communication (COMM)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### UPPER DIVISION COURSES

**NOTE: Communication courses numbered 500 to 599 are not acceptable for the Master of Arts degree in Communication.**

#### COMM 508. Media Literacy (3)

Prerequisites: Communication 300 and 350. Admission to a major or minor in the School of Communication.

Role played by video texts in shaping culture including information distribution, entertainment, and socio-cultural influence exercised by television. Emphasis on audience/medium relationship and to developing critical skills.

#### COMM 555. Conflict Management Communication (3)

Prerequisites: Communication 300 and 350. Admission to a major or minor in the School of Communication.

Approaches to conflict communication in international, societal, group, institutional, and interpersonal contexts.

#### COMM 596. Selected Topics (1-4)

Prerequisite: 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)

Prerequisite: 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)

Prerequisite: Credit or concurrent registration in 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)

Prerequisite: Credit or concurrent registration in 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)

Prerequisite: Credit or concurrent registration in 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)

Prerequisite: Credit or concurrent registration in Communication 601.

Historical and contemporary assumptions of ethnographic inquiry, including research design, data collection, and analysis of field materials.

## Communication

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### **COMM 665. Seminar: Conversation Analysis in Communication Research (3)**

Prerequisite: 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)**

Prerequisite: 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 705. Seminar: Performance Studies (3)**

Prerequisite: Credit or concurrent registration in Communication 601. Critical examination of embodiment of written and spoken human communication in variety of social and cultural contexts and practices to include ritual, play, narrative, storytelling, folklore, and popular media.

### **COMM 706. Seminar: Organizational Communication (3)**

Prerequisite: 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 707. Seminar: Instructional Communication (3)**

Prerequisite: Credit or concurrent registration in Communication 601. Communication relationships in instructional setting, teacher verbal and non verbal immediacy, student communication apprehension, as a function of instructional modalities, and cultural diversity issues.

### **COMM 715. Seminar: Nonverbal Communication (3)**

Prerequisite: 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: Health Communication (3)**

Prerequisite: 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)**

Prerequisite: Credit or concurrent registration in Communication 601. Contemporary theory and research addressing interpersonal verbal and nonverbal communication in intimate and non-intimate relationships.

### **COMM 740. Seminar: Rhetorical Theory (3)**

Prerequisite: Credit or concurrent registration in Communication 601. Different perspectives on rhetoric and human communication explored to better understand historical and contemporary theories of rhetoric.

### **COMM 745. Seminar: Rhetoric of Women's Rights (3)**

Prerequisite: Credit or concurrent registration in Communication 601.

Rhetoric of women's suffrage movement, feminist rhetoric from 1960s and 1970s and contemporary feminist rhetoric.

### **COMM 750. Seminar: Selected Topics: Communication Contexts (3)**

Prerequisite: Credit or concurrent registration in Communication 601. Intensive study in specific contextual forms 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 751. Seminar: Gender and Communication (3)**

Prerequisite: Credit or concurrent registration in Communication 601. Socially constructed gender through communication. Contexts include interpersonal relationships, public discourse, and organizations.

### **COMM 752. Seminar: Dark Side of Communication (3)**

Prerequisite: Credit or concurrent registration in Communication 601. Communication considered destructive or unethical yet functional, productive or productive and ethical yet dysfunctional, destructive or evil, or ideologically ignored by current inquiry; including jealousy, infidelity, coercion, deception, aggression, and manipulation.

### **COMM 755. Seminar: Public Address (3)**

Prerequisite: 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)**

Prerequisite: 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 783. Seminar: Medical Interaction (3)**

Prerequisite: Credit or concurrent registration in Communication 601. Communication in medical interviewing using conversational analysis of doctor-patient interactions.

### **COMM 786. Seminar: Communication and Leadership (3)**

Prerequisite: Credit or concurrent registration in Communication 601. Theory and research on role and function of communication behavior in exercise of leadership in contemporary organizations and public life.

### **COMM 792. Seminar: Persuasion (3)**

Prerequisite: 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**

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

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

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# Computational Science

In the College of Sciences

**OFFICE: Geology/Mathematics/Computer Science 206H**  
**TELEPHONE: 619-594-3430 / FAX: 619-594-2459**  
**<http://www.csrc.sdsu.edu>**

## Associated Faculty for Computational Science

José E. Castillo, Ph.D., Professor of Mathematics, Program Director  
Ricardo Carretero, Ph.D., Professor of Mathematics  
Subrata Bhattacharjee, Ph.D., Professor of Mechanical Engineering  
Andrew L. Cooksy, Ph.D., Professor of Chemistry and Biochemistry  
Steven M. Day, Ph.D., Professor of Geological Sciences,  
The Rollin and Caroline Eckis Chair in Seismology  
Juanjuan Fan, Ph.D., Professor of Statistics  
Terrence G. Frey, Ph.D., Professor of Biology  
Calvin W. Johnson, Ph.D., Professor of Physics  
Richard A. Levine, Ph.D., Professor of Statistics  
Joseph M. Mahaffy, Ph.D., Professor of Mathematics  
Eugene A. Olevsky, Ph.D., Distinguished Professor of Mechanical  
Engineering  
Kim Bak Olsen, Ph.D., Professor of Geological Sciences  
Antonio Palacios, Ph.D., Professor of Mathematics  
Paul J. Paolini, Jr., Ph.D., Professor of Biology, Emeritus  
Patrick J. Papin, Ph.D., Professor of Physics and Associate Dean for  
Academic Affairs, College of Sciences  
Forest Rohwer, Ph.D., Professor of Biology  
Peter Salamon, Ph.D., Professor of Mathematics  
Eric L. Sandquist, Ph.D., Professor of Astronomy  
Anca Mara Segall, Ph.D., Professor of Biology  
Samuel S. P. Shen, Ph.D., Professor of Mathematics  
Fridolin Weber, Ph.D., Professor of Physics  
Arlette R.C. Baljon, Ph.D., Associate Professor of Physics  
Peter Blomgren, Ph.D., Associate Professor of Mathematics  
Michael W. Bromley, Ph.D., Associate Professor of Physics  
Scott T. Kelley, Ph.D., Associate Professor of Biology  
Sunil Kumar, Ph.D., Associate Professor of Electrical and Computer  
Engineering  
John J. Love, Ph.D., Associate Professor of Chemistry and  
Biochemistry  
Michael O'Sullivan, 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  
Satchi Venkataraman, Ph.D., Associate Professor of Aerospace  
Engineering and Engineering Mechanics  
Robert W. Zeller, Ph.D., Associate Professor of Biology  
Barbara Ann Bailey, Ph.D., Assistant Professor of Statistics  
Kristin A. Duncan, Ph.D., Assistant Professor of Statistics  
Robert A. Edwards, Ph.D., Assistant Professor of Computer Science

## 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 post-secondary 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) English language 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) Copies of official transcripts from all post-secondary 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 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 Four of this bulletin.

### Specific Requirements for the Master of Science Degree

**(Major Code: 07992) (SIMS Code: 773001)**

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 Four 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 521 Introduction to Computational Science (3)
  - COMP 526 Computational Methods for Scientists (3)
  - COMP 536 Computational Modeling for Scientists (3)
  - COMP 589 Computational Imaging (3)
  - COMP 605/CS 605 Scientific Computing (3)
  - CS 607 Computational Database Fundamentals (3)
  - CS 689 Imaging Science (3)
  - CS 503 Scientific Database Techniques (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.

Substitution of courses is permitted based on background and research interest with consent of director.

### Concentration in Professional Applications (Offered through the College of Extended Studies) (Major Code: 07992) (SIMS Code: 773010)

The concentration focuses on professional applications of computational science. To enter the program, students must possess a bachelors degree with a strong mathematical background. The student must complete a graduate program of 40 units to include the following:

#### Required core courses (34 units):

##### Core Courses

- COMP 526 Computational Methods for Scientists (3)
- COMP 536 Computational Modeling for Scientists (3)
- COMP 589 Computational Imaging (3)
- COMP 601 Seminar: Business Skills for the Information Age (3)
- COMP 602 Organizational Development (2)
- COMP 603 Engineering Economics for Scientists (2)
- COMP 604 Computational and Applied Statistics (3)
- COMP 606 Designing Scientific and Industrial Experiments (3)
- COMP 607 Computational Database Fundamentals (3)
- COMP 626 Applied Mathematics for Computational Scientists (3)
- COMP 670 Seminar: Problems in Computational Science (3)
- COMP 671 Problem Solving Techniques (3)

##### Project (6 units):

- COMP 797 Research (3) Cr/NC/RP
- COMP 798 Special Study (3) and comprehensive examination

Substitution of core courses is permitted based on disciplines related to student's specialization with consent of director.

## Section II. Doctoral Program

<http://www.csrc.sdsu.edu/cscc/programs/phd.php>

### 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) (SIMS Code: 773002)

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, Bromley, Carretero, Castillo, Cooksy, Day, Edwards, Fargion, Frey, In, Johnson, Kevorkian, Kumar, Love, Mahaffy, McGuire, Mellors, Olevsky, Oseroff, O'Sullivan, Palacios, Paolini, Pullman, Roch, Rohwer, Salamon, Sandquist, Segall, 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

(Major Code: 07992) (SIMS Code: 773003)

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.

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

#### SDSU courses:

1. Statistics 700, 701, 702.
2. Minimum 15 units of graduate level computational statistics coursework tailored to the student's research interests selected in consultation with and approved by program director.

#### Claremont Graduate University courses:

1. Sixteen units from MATH 350, 351, 352, 353, 355, or computational statistics courses selected in consultation with and approved by program director.
2. Eight units of electives selected in consultation with and approved by program director.

### 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.

A student with a Bachelor of Science degree will satisfy the initial 24 units of SDSU course requirements by completing a Master of Science degree in statistics at SDSU, with program of study to include Statistics 700, 701, and 702, then taking 24 units of coursework at CGU.

### 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, Chen, 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

(Offered through the College of Extended Studies)

(Major Code: 90046) (SIMS Code: 773005)

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. Credit earned through the Advanced Certificate in Professional Computational Science can be applied toward the units required to obtain the Master of Science degree in Computational Science with a Concentration in Professional Applications.

The advanced certificate requires 12 units to include Computational Science 526, 589, 601, 604 with a grade of B or better in each course. Other courses may not be substituted.

## Courses Acceptable on Master's and Doctoral Degree Programs in Computational Science (COMP)

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### UPPER DIVISION COURSES

#### COMP 521. Introduction to Computational Science (3)

Prerequisite: Mathematics 151.

Matrices and linear equations, solving ordinary differential equations (ODEs), vector spaces, closed form solutions, qualitative theory, Eigenvalues, linear maps, linear differential equations, other techniques, nonlinear systems, higher dimensional systems.

#### COMP 526. Computational Methods for Scientists (3)

Prerequisites: Mathematics 252 and 254.

Translating mathematical problem descriptions to computer programs. Introduction to Unix system.

#### COMP 536. Computational Modeling for Scientists (3)

Prerequisite: Mathematics 151.

Models, computational tools, errors, system dynamics, growth, stability, multicompartment models, Euler's, Runge-Kutta methods, system dynamics, infectious disease, enzyme kinetics, environmental cycles, cardiovascular system, metabolism, global warming, empirical models, HIV, population distributions, diffusion, HPC.

#### 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.

#### COMP 596. Advanced Topics in Computational Science (1-4)

Prerequisite: Consent of instructor.

Selected topics in computational 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

#### COMP 600. Seminar (1-3)

Prerequisite: Consent of instructor.

An intensive study in advanced computational science. May be repeated with new content. Topic to be announced in the *Class Schedule*. Maximum credit six units applicable to a master's degree.

#### COMP 601. Seminar: Business Skills for the Information Age (3)

Prerequisite: Graduate standing.

Human and infrastructure management issues specific to science and technology workplaces.

#### COMP 602. Organizational Development (2)

Prerequisite: Graduate standing.

Contemporary organizational and leadership theory and practice through personal reflection, team assessment and feedback, and case analysis. Nature of change, forces for change, and impact of change in organizations and individuals. Organizational processes, structures and cultures, and effect on organization's performance.

#### COMP 603. Engineering Economics for Scientists (2)

Prerequisites: MS Excel and basic mathematics.

Systematic economic analysis of engineering problems.

#### COMP 604. Computational and Applied Statistics (3)

Prerequisite: Mathematics 254.

Statistical decision making and methods relevant to scientific inquiries.

#### COMP 605. Scientific Computing (3)

(Same course as Computer Science 605)

Prerequisites: Graduate standing and knowledge of the C programming language or FORTRAN or Computational Science 526.

Parallel programming using message passing to include high performance computing and MPI language extensions. (Formerly numbered Computer Science 505.)

#### COMP 606. Designing Scientific and Industrial Experiments (3)

Prerequisite: Computational Science 604.

Design selection, data collection, and evaluation using multiple regression to analyze experimental data.

#### COMP 607. Computational Database Fundamentals (3)

Prerequisite: Graduate standing.

Data-processing techniques, software, database design, implementation, and manipulation.

**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)**

Prerequisite: Graduate standing.

Applications of computational science in solving problems using a variety of methods. Problems selected from biology, chemistry, physics, and other fields.

**COMP 671. Problem Solving Techniques (3)**

Prerequisite: Graduate standing.

Data abstraction and problem solving skills.

**COMP 689. Imaging Science (3)**

Prerequisite: Mathematics 151.

Field imaging sciences to include interdisciplinary nature of the field; interrelated topics that define the state-of-the-art in imaging science.

**COMP 696. Selected Topics in Computational Science (3)**

Prerequisite: 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**

Prerequisite: Six units of graduate level computational science courses.

Research in computational science. Maximum credit six units applicable to a master's degree.

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

Prerequisite: Consent of staff; to be arranged with program director and instructor.

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

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

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

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

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

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

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

**COMP 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

**DOCTORAL COURSES**

**COMP 800. Seminar (3)**

Prerequisite: Admission to the doctoral program.

Topics in different areas of computational science.

**COMP 810. Colloquium in Computational Science (1) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Discussions on advances in computational science research. Course to be taken every semester.

**COMP 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**

Prerequisite: Admission to the doctoral program.

Independent investigation in general area of field of dissertation. Conducted in industry or national laboratory under faculty supervision. Maximum credit 36 units.

**COMP 897. Doctoral Research (1-9) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Independent investigation in general field of dissertation. Maximum credit 36 units.

**COMP 898. Doctoral Special Study (1-3) Cr/NC/RP**

Prerequisite: Advancement to candidacy.

Individual study leading to study and research required for doctoral dissertation.

**COMP 899. Doctoral Dissertation (1-15) Cr/NC/RP**

Prerequisites: An officially constituted dissertation committee and advancement to candidacy.

Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the student plans to graduate.

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# 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  
Tao Xie, Ph.D., Associate Professor of Computer Science  
Robert A. Edwards, 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.

A master's degree in computer science provides education and creative experience to prepare graduates for advanced professional employment in industry or government, or for college-level teaching.

## 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) English language 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 Four of this bulletin.

## Specific Requirements for the Master of Science Degree in Computer Science

**(Major Code: 07011) (SIMS Code: 773801)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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 having a minimum 3.5 GPA in courses applicable to the master's degree, and 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)

**(Major Code: 07011) (SIMS Code: 773803)**

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.

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:

- 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.
- At least one course from four of the following five areas of study: PFL, OSA, ALC, ISR, and DSW.
- 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. Under certain conditions, students may substitute additional coursework for one or two of the three required examinations. Further information is available on the department Web site.

Full-time international students on Plan B who have completed all their required coursework must show progress in at least two areas of study each semester (until they have completed all but one). This can be done by either taking qualifying examinations or additional coursework, which must be preapproved by the graduate adviser.

**Areas of Study**

**(PFL) Programming and Formal Languages:** Computer Science 520, 524, 532, 533, 534, 535, 537, 540, 541, 542, 583, 605, 620, 632, 635, 636.

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

**(ALC) Algorithms and Complexity:** Computer Science 558, 562, 566, 600, 660, 662, 664; Mathematics 525, 625, 626, 667, 668, 693A, 693B.

**(ISR) Intelligent Systems and Robotics:** Computer Science 550, 552, 553, 556, 559, 581, 582, 652, 653, 656, 657, 682.

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

**Advanced Web and Mobile Applications Development Certificate**

**(Major Code: 90054) (SIMS Code: 773806)**

(Offered through the College of Extended Studies)

The advanced certificate in Web and Mobile Applications Development provides students with the specialized knowledge that is important in the development of Web and mobile computer applications. Students will study and gain experience with the languages and frameworks that are most commonly used in developing these applications, with the design of user interfaces and software systems, and with associated topics such as networking, hosting infrastructure, and security. They will also learn the fundamental principles on which these topics are based, so that they will be prepared for the new technologies that are constantly being developed.

The admission requirement is a bachelor's degree in computer science or a closely related field. Individuals with an equivalent knowledge of the background materials through work or self-study may be accepted into this program at the discretion of the program director.

The certificate requires completion of at least four courses (12 units) with the approval of the program adviser selected from Computer Science 545, 546, 547, 645, 646, 648. At least two of the four courses must be at the 600-level.

For more information, contact the Department of Computer Science at <http://www.cs.sdsu.edu>.

**Courses Acceptable on Master's Degree Program in Computer Science (CS)**

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

**UPPER DIVISION COURSES****CS 501. Computational Software (3)**

Prerequisite: Computer Science 310.

Design and implementation of software for computational science. Makefiles in UNIX environment, efficient Fortran and OO 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 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 534. Software Measurement (3)**

Prerequisite: Computer Science 532.

Basics of software measurement and use of measurement information to ensure quality software and determine software process effectiveness. Software estimation, cost estimation models, definition of various measures, tools to support measurement collection and analysis, analysis techniques, and case studies.

**CS 535. Object-Oriented Programming and Design (3)**

Prerequisites: Computer Science 310 and 320.

Basic concepts of object-oriented programming; classes, objects, messages, data abstraction, inheritance, encapsulation. Object-oriented design methodology.

### **CS 537. Component GIS Architectures (3)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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 545. Introduction to Web Application Development (3) (Offered only in Extension)**

Prerequisite: Computer Science 310.

World Wide Web application development. XHTML, CSS, Javascript, client-side and server-side scripting, PHP and CGI programming with Perl. Application integration with SQL database systems.

### **CS 546. Human Computer Interfaces (3) (Offered only in Extension)**

Prerequisites: Computer Science 310 and 320.

Common interface idioms and support available for loose integration into aesthetically appealing and practical, efficient interaction between humans and machine. Editors, browsers, games, networking sites, posting boards, etc. Principles that are ubiquitous among tools for HCI development.

### **CS 547. Programming and Scripting Languages for Web Applications (3) (Offered only in Extension)**

Prerequisites: Computer Science 310 and 320.

Principles and practice of dynamic and scripting and functional languages used in web applications. Basic language concepts, data structures in dynamic languages, code structure, code quality, testing, string manipulation, dynamic code generation.

### **CS 550. Artificial Intelligence (3)**

Prerequisites: Computer Science 108 and either Mathematics 245 or 523.

Heuristic approaches to problem solving. Systematic methods of search of the problem state space. Theorem proving by machine. Resolution principle and its applications.

### **CS 551. User Interface Environments (3)**

Prerequisites: Computer Science 310 and 320.

Design of user-machine interfaces in interactive systems. Problems faced by user of an interactive system; basic issues and principles involved in design and implementation of good and friendly user-machine graphical interfaces.

### **CS 552. Artificial Intelligence II (3)**

Prerequisite: Computer Science 550.

Limitations of symbol-based approach to artificial intelligence from Computer Science 550. Presented alternatives are genetic and probabilistic approaches, connectionist and emergent representation and learning, natural language processing, intelligence measures and cognitive models. Seminal publications shaping these techniques.

### **CS 553. Neural Networks (3)**

Prerequisites: Computer Science 320 and Mathematics 254.  
Principles of neural networks, their theory and applications.

### **CS 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)**

Prerequisite: Computer Science 310.

Algorithms for solving frequently occurring problems. Analysis techniques and solutions to recurrence relations. Searching and sorting algorithms. Graph problems (shortest paths, minimal spanning trees, graph search, etc.). NP complete problems. Not acceptable for the M.S. degree in Computer Science.

### **CS 562. Automata Theory (3)**

Prerequisite: Mathematics 245 or 521A.

Definition of finite automata. Classification of finite automaton definable languages. Minimization of finite automata. Nondeterministic finite automata. Sequential machines with output. Regular sets and expressions. Introduction to grammars.

### **CS 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 multiprocessor system.

### **CS 574. Computer Security (3)**

Prerequisites: Computer Science 310; Mathematics 245; Statistics 550; and credit or concurrent registration in Computer Science 570.

Principles of computer security and application of principles to operating systems, database systems, and computer networks. Topics include encryption techniques, access controls, and information flow controls.

### **CS 576. Computer Networks and Distributed Systems (3)**

Prerequisite: Credit or concurrent registration in Computer Science 570.

Basic networking concepts such as seven-layer reference model, transmission media, addressing, subnetting and supernetting, 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)**

Prerequisite: 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 583. 3D Game Programming (3)**

Prerequisite: Computer Science 310 or equivalent programming background.

Development of programming skills using software environment of a game engine and its scripting language. 3D concepts for game play, modeling, and programming. Roles needed in software development team. Contrast creation of original 3D object models for game world with incorporation of pre-created generic models.

**CS 596. Advanced Topics in Computer Science (1-4)**

Prerequisite: Consent of instructor.

Selected topics in computer science. May be repeated with the approval of the instructor. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. 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)**  
**(Same course as Bioinformatics and Medical Informatics 600)**

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 605. Scientific Computing (3)**

**(Same course as Computational Science 605)**

Prerequisites: Graduate standing and knowledge of the C programming language or FORTRAN or Computational Science 526.

Parallel programming using message passing to include high performance computing and MPI language extensions. (Formerly numbered Computer Science 505.)

**CS 615. Spatial Database (3)**

Prerequisite: 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)**

Prerequisite: Computer Science 532.

Theoretical and practical concepts associated with the specification, design, testing, and maintenance of large software systems. Use of automated tools in engineering such systems.

**CS 635. Advanced Object-Oriented Design and Programming (3)**

Prerequisites: Computer Science 535 and knowledge of an object-oriented programming language.

Advanced topics in object-oriented programming and design, code reuse, building class libraries, quality of objects, coupling, cohesion, design patterns, distributed objects.

**CS 636. Management of Software Development (3)**

Prerequisite: Computer Science 532 or 535.

Managing software projects. Modern software management process models. Project planning, cost estimation, tracking and control, staffing, risk management, and software process improvement.

**CS 645. Advanced Web Application Development (3)**  
**(Offered only in Extension)**

Prerequisite: Computer Science 545.

XHTML, CSS, JavaScript, client-side and server-side scripting, Java servlets, JSP, Frameworks. Server systems and development tools appropriate for large, complex project. SQL database via JDBC.

**CS 646. Mobile Application Development (3)**  
**(Offered only in Extension)**

Prerequisite: Computer Science 560.

Design and implementation of applications for smart mobile phones and mobile devices. **May be repeated with new content. See *Class Schedule* for specific content, including device types. Maximum credit six units applicable to a master's degree.**

**CS 648. Emerging Web and Mobile Technologies (3)**  
**(Offered only in Extension)**

Prerequisite: Computer Science 545.

Emerging technologies, issues, and concepts in Web and mobile software development. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

**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)**

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)**

Prerequisite: 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 653. Data Mining and Knowledge Discovery (3)**

Prerequisite: Computer Science 320.

Foundations of data mining and knowledge discovery. Diverse methods, algorithms, design techniques and application practice including statistical and Bayesian methods, pattern recognition, clustering, knowledge discovery in data sets, machine learning, neural networks, rough and fuzzy sets.

**CS 656. Advanced Robotics (3)**

Prerequisite: Computer Science 556.

Computer-based techniques for low-, medium-, and high-level robot control including sequential and parallel schemes for robot dynamics, robot programming and robot task planning.

## Computer Science

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### CS 657. Intelligent Systems and Control (3)

Prerequisites: Computer Science 535 and 560 or Computer Science 530.

Genetic and evolutionary algorithms, genetic programming and applications, fuzzy logic and approximate reasoning, rule-based inference engines, intelligent path planning and applications to robotics, dynamic systems and their simulations using Simulink, conventional control and intelligent control, intelligent agents, autonomous and multi-agent systems.

### CS 660. Combinatorial Algorithms and Data Structures (3)

Prerequisite: Computer Science 560.

Algorithm design techniques. Network flow and matching. Complexity analysis. NP-completeness, reductions among NP-complete problems. Approximation algorithms for NP-complete problems such as the traveling salesman problem.

### CS 661. Geometric Algorithms (3)

Prerequisite: Computer Science 560.

Modern algorithmic solutions to problems where spatial data structures are relevant. Convex hulls, segment intersections, polygon triangulation, orthogonal range searching, trapezoidal decomposition, Voronoi diagrams, Delaunay triangulations. Apt for computer graphics, GIS, robotics, etc.

### CS 662. Theory of Parallel Algorithms (3)

Prerequisites: Computer Science 560 and Mathematics 254.

Models for parallel computation. Parallel algorithms for several common problems including sorting, searching, graph problems, and matrix problems. Complexity of parallel algorithms. Lower bounds on parallel complexity.

### CS 664. Theory of Computability (3)

Prerequisite: Computer Science 562.

Turing machines and other formal models of computation. Recursive function theory. The Ackermann function. Solvable and unsolvable problems.

### CS 670. Advanced Operating Systems (3)

Prerequisite: Computer Science 570.

Survey of advanced operating systems including distributed systems. Associated design issues. Case studies.

### CS 678. Broadband Communication Networks (3)

Prerequisite: 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)

Prerequisite: 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)

Prerequisite: 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

Prerequisite: Award of graduate teaching associateship in computer science.

Supervision in teaching computer science. Lecture writing, style of lecture presentation and alternatives, test and syllabus construction, and grading system. Not applicable to an advanced degree. Required for first semester GTA's.

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

Prerequisite: Six units of graduate level computer science courses.

Research in computer science. Maximum credit six units applicable to a master's degree.

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

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

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

### CS 799A. Thesis or Project (3) Cr/NC/RP

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

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

### CS 799B. Thesis or Project Extension (0) Cr/NC

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

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

### CS 799C. Comprehensive Examination Extension (0) Cr/NC

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

For additional courses useful to computer scientists, see:

Mathematics 523.	Mathematical Logic
Mathematics 541.	Introduction to Numerical Analysis and Computing
Mathematics 542.	Introduction to Numerical Solutions of Differential Equations
Mathematics 561.	Applied Graph Theory

## Counseling and School Psychology

Refer to "Education" in this section of the bulletin.



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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

Louis M. Rea, Ph.D., Professor of Public Affairs, Interim Director of School of Public Affairs (M.P.A. Graduate Coordinator)  
Ruth Xiaoru Liu, Ph.D., Professor of Sociology  
Sheldon X. Zhang, Ph.D., Professor of Sociology  
Michael A. McCall, Ph.D., Associate 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  
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. This program can prepare students for a career in college teaching.

## 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) English language 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 Four of this bulletin.

### Specific Requirements for the Master of Science Degree

(Major Code: 22091) (SIMS Code: 662001)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree in Part Four 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)

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):

P A 604 Methods of Analysis in Public and Urban Affairs (3)

OR

SOC 602 Advanced Research Methods: Core Course (3)

P A 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 570 Organized Crime: Domestic and International Perspectives (3)

CJ 796 Internship in Criminal Justice (3) Cr/NC

P A 660 Administration and Public Policy Development (3)

P A 684 Seminar in Transnational Criminal Justice: Mexico and the U.S. (3)

SOC 601 Advanced Social Theory: Core Course (3)

SOC 608 Advanced Qualitative Methods (3)

SOC 710 Teaching Sociology (3)

SOC 796 Field Practicum (3) Cr/NC

Culminating Experience (3 units required):

Students must complete either a thesis or a comprehensive examination to graduate.

Plan A (Thesis):

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

Plan B (Comprehensive Examination):

CJ 797 Research in Criminal Justice (3) Cr/NC/RP

### Courses Acceptable on Master's Degree Program in Criminal Justice and Criminology (CJ)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs* sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

#### UPPER DIVISION COURSES

##### CJ 510. Contemporary Issues in Law Enforcement (3)

Prerequisite: 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)

Prerequisite: 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)

Prerequisite: Criminal Justice 300.

Present and probable roles of public and private agencies and volunteers in criminal justice. (Formerly numbered Criminal Justice Administration 543.)

##### CJ 550. Study Abroad: Criminal Justice (3)

Prerequisites: Criminal Justice 301 and upper division standing.

Selected topics in comparative criminal justice. Course taught abroad. May be repeated once with new content. See *Class Schedule* for specific content. Maximum credit six units.

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

Prerequisite: 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)**

Prerequisite: Criminal Justice 301.  
Administrative problems of criminal justice systems. (Formerly numbered Criminal Justice Administration 601.)

**CJ 602. Seminar in Comparative Criminal Justice System (3)**

Prerequisite: 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)**

Prerequisite: Criminal Justice 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)**

Prerequisite: Graduate standing.  
Juvenile justice system in U.S. and throughout the world. Responses to delinquency and youth violence. History and foundations of juvenile court, juvenile justice reforms, context, causes, and correlates of youth violence and gang involvement, including programs and policies designed to address these problems. (Formerly numbered Criminal Justice Administration 605.)

**CJ 696. Selected Topics in Criminal Justice (3)**

Prerequisite: 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)**

Prerequisite: 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**

Prerequisite: Consent of instructor.  
Students will be assigned to various government agencies and will work under joint supervision of agency heads and the course instructor. Participation in staff and internship conferences. Maximum credit twelve units. (Formerly numbered Criminal Justice Administration 796.)

**CJ 797. Research in Criminal Justice (3) Cr/NC/RP**

Prerequisite: 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**

Prerequisite: 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**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.  
Registration required in any semester or term following assignment of RP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

**CJ 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.  
Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

**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**

**<http://www-rohan.sdsu.edu/~econ/graduate.htm>**

## Faculty

Mark A. Thayer, Ph.D., Professor of Economics, Emeritus,  
Chair of Department

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

Jennifer Imazeki, Ph.D., Professor of Economics

Kangoh Lee, Ph.D., Professor of Economics

Edmund M. Balsdon, Ph.D., Associate Professor of Economics  
(Graduate Adviser)

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

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

Thitima Puttitanun, Ph.D., Associate Professor of Economics

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

Quazi Shahriar, Ph.D., Assistant Professor of Economics

## Assistantships

A number of teaching and research assistantships 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 associateship position. Application forms and additional information may be obtained from the graduate student coordinator of the Department of Economics.

## Scholarships

Two general scholarship programs are available for qualified incoming and continuing economics M.A. students. Applications for the Terhune Scholarship and the McCuen Scholarship must be submitted to the Office of Financial Aid and Scholarships by March 1 for awards distributed the following academic year. Terhune awards can be up to \$5,000 and McCuen awards can be up to \$20,000 annually. The department administers several additional scholarships, which are awarded each spring semester. These include the Center for Public Economics awards ranging from \$300 to \$1,500. Application forms and additional information may be obtained from the department office for these scholarship opportunities.

## 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.csummentor.edu> along with the \$55 application fee by February 1 for fall admission.

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 by March 1 for fall admission:

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) English language 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 by March 1 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.

Visit the Web site at <http://www-rohan.sdsu.edu/~econ/graduate.htm>.

## Advancement to Candidacy

In addition to the general requirements for advancement to candidacy described in Part Four 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) (SIMS Code: 111901)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree described in Part Four of this bulletin, the student must complete an approved graduate program of 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 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  
(SIMS Code: 111925)**

- 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  
(SIMS Code: 111980)**

- 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 (3)
- 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)

## Courses Acceptable on Master's Degree Programs in Economics (ECON)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs* sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### UPPER DIVISION COURSES

#### **ECON 507. Mathematical Economics (3)**

Prerequisite: Mathematics 121 or 150. Recommended: Economics 320 or 321.

Mathematical concepts as tools in understanding, developing, and illustrating economic theories. Applications of calculus and linear equations to constrained optimization, macro models, elasticity, general equilibrium, and input-output analysis.

#### **ECON 561. International Trade (3)**

Prerequisites: Economics 320 and 321.

Theory and policy of international trade with examples drawn from current issues. Models of determinants of trade. Free trade and protectionism. Trade and economic development. Trading blocs, the European community, GATT and U.S. trade policy.

#### **ECON 565. North American Economic Relations (3)**

Prerequisites: Economics 101 and 102. Recommended: Economics 360.

Socioeconomic development of U.S., Mexico, and Canada since World War II. Issues affecting the three countries' relations, including trade investment, technology, and international organizations and agreements.

#### **ECON 592. International Monetary Theory and Policy (3)**

Prerequisite: Economics 320 or 490.

International monetary spillovers from domestic macroeconomic policies. Foreign exchange markets and balance of payments. Fixed, flexible and managed exchange rates. Bretton Woods, international monetary fund, and world debt crisis.

#### **ECON 596. Experimental Topics (3)**

Prerequisite: Consent of instructor.

Intensive study in specific areas of economics. May be repeated with new content. 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)**

Prerequisite: Economics 321.

Theories of the consumer, the firm, and the market. Topics in welfare and general equilibrium. Duality and uncertainty.

#### **ECON 631. Applied Microeconomic Methods (3)**

Prerequisite: Economics 630.

Decision-making techniques in applied microeconomics including cost-benefit analysis, choice under uncertainty and applied game theory techniques.

#### **ECON 640. Econometrics (3)**

Prerequisites: Economics 321; Mathematics 120 or 121 or 150.

Measurement in economics. Use of economic models involving multiple regression analysis, simultaneous equation systems, and time series analysis.

#### **ECON 640L. Econometrics Laboratory I (1)**

Two hours of laboratory for 12 weeks.

Prerequisite: 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)**

Prerequisite: Economics 640.

Econometric applications and techniques including discrete choice, panel data simultaneous equations and time series. Data analysis and statistical software training in STATA, SAS, and SPSS.

#### **ECON 641L. Econometrics Laboratory II (1)**

Two hours of laboratory for 12 weeks.

Prerequisite: 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)**

Prerequisite: 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

## Economics

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### **ECON 710. Seminar in Public Economics (3)**

Prerequisites: Economics 630 or classified graduate standing in another department and consent of instructor.

Government in a market economy. Impact on individual and firm behavior. Maximum credit six units of Economics 710 applicable to a master's degree. See Class Schedule for specific content. Seminar topics include:

- Seminar in Environmental Issues
- Seminar in Public Expenditures
- Seminar in Urban and Regional
- Seminar in Regulation
- Seminar in Tax Policy

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

Prerequisite: Consent of instructor.

Development process and policies. Planning techniques. Relations among developing and developed countries. Maximum credit six units of Economics 720 applicable to a master's degree. See Class Schedule for specific content. Seminar topics include:

- Seminar in Development Economics
- Seminar in Development Planning
- Seminar in International Trade and Commercial Policy

### **ECON 730. Seminar in Macroeconomic Policy (3)**

Prerequisite: Consent of instructor.

Applications of macroeconomics to open economics. Maximum credit six units of Economics 730 applicable to a master's degree. See Class Schedule for specific content. Seminar topics include:

- Seminar in National Monetary Institutions
- Seminar in International Monetary Policy
- Seminar in Business Cycles
- Seminar in Macroeconomic Modeling and Prediction

### **ECON 740. Seminar in Applied Economic Research (3)**

Prerequisites: Advancement to candidacy and consent of graduate adviser.

Advanced treatment of research design and methodology. Application of empirical techniques to selected problems. (Formerly numbered Economics 740A.)

### **ECON 750. Seminar in History of Economic Thought (3)**

Prerequisite: Consent of instructor.

Economic development in historical perspective. Maximum credit six units of Economics 750 applicable to a master's degree. See Class Schedule for specific content. Seminar topics include:

- Seminar in U.S. Economic History
- Seminar in Economic Growth in Historical Perspective
- Seminar in Contemporary Economic Systems

### **ECON 795. Internship in Economics (3) Cr/NC**

Prerequisites: Economics 630, 640, and approval of graduate adviser.

Students will be assigned to various jobs in which economic theory can be applied to decision making. Supervision will be shared by the graduate adviser and on-the-job supervisor.

### **ECON 797. Research (3) Cr/NC/RP**

Prerequisites: Classified graduate standing and consent of instructor.

Independent research project in an area of economics.

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

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

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

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

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

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

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

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

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

### **ECON 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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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.

Our graduate teaching associateships program can prepare students for a teaching career.

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) English language 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 academic and/or professional recommendation forms;
- (3) A two to three page 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) (SIMS Code 331901)

<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 recommendation forms 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://coe.sdsu.edu/doc/prospective/applications.php.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);
- Three written qualifying examinations;
- 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

Three 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 three 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-Michel, 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, Lapp, Mason, Mathison, McFarlane, Moss, Ochoa, Olney, Pang, Philipp, Pumpian, Ritchie, Robinson-Zañartu, A. Rodriguez, Santa Cruz, Sax, Uline, Wang, Zozakiewicz

#### Claremont Graduate University

Dean: Margaret Grogan  
 Faculty: Adam, Cohn, DeHart, Drew, Dreyer, Paik, Perez, Perkins, Poplin, Robb, D. D. Smith, D. G. Smith, Thomas, Thompson

## Doctor of Education Degree in Educational Leadership

(Major Code: 08271) (SIMS Code: 331930)

<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) (SIMS Code: 331931)

- 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) (SIMS Code: 331932)

- ARP 760 Internship in Postsecondary 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 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)
- ARP 827 Seminar in Emerging Issues in Postsecondary Educational Leadership (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, Harris, Jacobs, Jeffcoat, McFarlane, Olney, Piland, Sax

##### Educational Leadership

Basom, Cohn, Johnson, Meno, Pumpian, Uline

## Doctor of Education Degree (SDSU/USD)

(Major Code: 08011) (SIMS Code: 331902)

[http://www.sandiego.edu/soles/programs/  
learning\\_and\\_teaching/graduate\\_programs/joint\\_doctoral/](http://www.sandiego.edu/soles/programs/learning_and_teaching/graduate_programs/joint_doctoral/)

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, Alvarado, Basom, Bezuk, Bober-Michel, Bresciani, Cadiero-Kaplan, Cappello, Chizhik, Cohn, Degeneffe, Dodge, Espinosa, Evans, Farnan, Fearn, Fisher, Frey, Gallego, Gibson, Graves, Hall, Hampton, Hoffman, Ingraham, R. Jacobs, V. Jacobs, J. F. Johnson, J. R. Johnson, Kelly, Lamb, Lapp, Mason, Mathison, McFarlane, Moss, Ochoa, Olney, Pang, Philipp, Piland, Pumpian, Ritchie, Robinson-Zafartu, A. Rodriguez, 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**) (**SIMS Code: 331050**), 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.

## Education

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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. Teaching assistantships may be available.

### 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 English language 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 Drive
  - San Diego, CA 92182-1179
  - a. Completed program application checklist;
  - b. Three letters of recommendation;
  - c. Personal statement;
  - d. Curriculum vita;
  - 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, multicultural 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 Four 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 Four 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 and 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 and 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: Eng-  
lish – 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: 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 in School Psychology, 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) English language 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 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) (SIMS Code: 331006)

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 Counseling

##### (Major Code: 08261) (SIMS Code: 331021)

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) (SIMS Code: 331913)

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  
5500 Campanile Drive  
San Diego, CA 92182-1190

- (1) Department application;
- (2) Two letters of recommendation;
- (3) California Basic Educational Skills Test (CBEST) scores.

**Educational Technology**  
(Major Code: 08992) (SIMS Code: 331937)

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 available at <http://edtec.sdsu.edu/apply.htm>;
- (2) Three letters of recommendation (in sealed envelopes);
- (3) Personal statement.

**Elementary Curriculum and Instruction**  
(Major Code: 08021) (SIMS Code: 331946)

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) (SIMS Code: 331947)

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) (SIMS Code: 331955)

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) (SIMS Code: 331964)

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: Dr. Sharan A. Gibson)  
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) (SIMS Code: 331973)

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) (SIMS Code: 331982)

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 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 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 Four 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 Four 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) and 791B (1 unit); 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.

#### 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) (SIMS Code: 331021)

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 606B Professional Issues in Mental Health Practice: Community-Based Block (3)
    - 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 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 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:

1. Core program:
  - ARP 610 Educational Leadership (3)
  - ARP 747 Educational Leadership in a Diverse Society (3)
2. Six to nine units selected, with the approval of the graduate adviser, from the following:
  - ARP 611 Program Development and Evaluation in Postsecondary Education (3)
  - ARP 631 Seminar in Teaching in Postsecondary Education (3)
  - ARP 680 Seminar in Administration, Rehabilitation and Postsecondary Education (3)
  - ARP 720 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)
3. Electives selected with the approval of the graduate adviser (6-9 units).
  - ED 690 Methods of Inquiry (3)
4. ED 690 Methods of Inquiry (3)
5. Research: Three to six units selected from the following:
  - ED 791A Evaluation Techniques (3)
  - ED 791B 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) (SIMS Code: 331913)

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:

1. Core program:
  - ARP 610 Educational Leadership (3)
  - ARP 620 Student Affairs in Higher Education (3)
2. Nine to 12 units selected, with the approval of the graduate adviser, from the following:
  - ARP 621 Theoretical Foundations of Student Affairs (3)
  - ARP 622 Communication and Group Process in Student Affairs Leadership (3)
  - ARP 623 Seminar: Critical Leadership Issues in Student Affairs (3)
  - ARP 680 Seminar in Administration, Rehabilitation and Postsecondary Education (3)
  - ARP 727 Emerging Issues in 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 Postsecondary Educational Leadership (2-6) Cr/NC/RP
3. ED 690 Methods of Inquiry (3)
4. Research: Three to six units selected from the following:
  - ED 791A Evaluation Techniques (3)
  - ED 791B 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:

1. Core program: Six units.
  - EDL 600 Principles of Educational Administration (3)
  - EDL 610 Educational Leadership in PreK-12 Educational Organizations (3)
2. Six to nine units selected, with the approval of the graduate adviser, from the following:
  - EDL 630 Curriculum Design and Management (3)
  - EDL 652 Seminar in Instructional Improvement and Evaluation (3)
  - EDL 655 Communication, Problem Solving, and Decision Making in PK-12 (3)
  - EDL 680 Seminar in PreK-12 Educational Administration (3) Cr/NC
3. Electives selected with the approval of the graduate adviser (6-9 units).
  - ED 690 Methods of Inquiry (3)
4. ED 690 Methods of Inquiry (3)
5. Research: Three to six units selected from the following:
  - ED 791A Evaluation Techniques (3)
  - ED 791B 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)**

Successful completion of the credential 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 Communication, Problem Solving, and Decision Making in PK-12 (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 credential 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.

**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 (Cr/NC) ..... 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) (SIMS Code: 331928)**

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) (SIMS Code: 331937)**

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 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**

**(Major Code: 08992) (SIMS Code: 331939)**

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**

**(Major Code: 08992) (SIMS Code: 331941)**

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 Post-secondary Education 631, 730, 747; Policy Studies in Language and Cross-Cultural Education 601, 612; Teacher Education 631, 639.

### Elementary Curriculum and Instruction (Major Code: 08021)(SIMS Code: 331946)

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), preferably holds a credential from California or certified to teach in another state. Coursework 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 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 Literacy and Language Arts; 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 Evaluation (3-1 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	Educational Web 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 (Major Code: 08994) (SIMS Code: 331955)

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

## Education

### Plan I: Curriculum and Critical Pedagogy Specialization

#### Core:

PLC 600A	Foundations of Democratic Schooling (3) or
PLC 600B	Foundations of Dual Language Programming for Critical Biliteracy Development (3)
PLC 601	Language Policies and Practices (3)
PLC 650	Curriculum Development for Urban School Communities (3)

**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) or
PLC 600B	Foundations of Dual Language Programming for Critical Biliteracy Development (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) (SIMS Code: 331964)

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, to include a basic course in methods and materials for teaching reading and TE 530, Children's/Adolescents' Literature (3); taken prior to or concurrent registration in TE 637, Instructional Strategies for Reading and Language Arts (4).
2. Core program (32 units)

TE 631	Seminar in Language Arts (3)
TE 736	Field Experience as a Reading Specialist (3)
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) (SIMS Code: 331973)

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), preferably holds a credential from California or certified to teach in another state. 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 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) (SIMS Code: 331982)

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

(Major Code: 08081) (SIMS Code: 331994)

Prerequisites: Special Education 527 or Basic California Teaching Credential with EEL endorsement/CLAD/BCLAD credential and Special Education 553.

Core (10-13 units): Special Education 651, 655, 654, 771; Education 690.

Advanced Specialization (10-13 units): Special Education 510, 605, or units selected from approved coursework in specialization area, 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  
(Major Code: 08081) (SIMS Code: 331991)**

Core (15 units): Special Education 644, 771, and nine 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; or 795A\*-795B\*; or 799A.

**Specialization in Early Childhood  
(Major Code: 08081) (SIMS Code: 331983)**

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 or Education 799A.

**Specialization in Mild/Moderate Disabilities  
(Major Code: 08081) (SIMS Code: 331992)**

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\* and nine 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 or Education 799A.

**Specialization in Moderate/Severe Disabilities  
(Major Code: 08081) (SIMS Code: 331993)**

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\* and nine 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 or Education 799A\* in departmentally approved sections.

**Specialization in Vocational Transition  
(Major Code: 08081) (SIMS Code: 331990)**

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 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 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)**

**(Major Code: 08292) (SIMS Code: 331948)**

- 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)**

**(Major Code: 08292) (SIMS Code: 331949)**

- TE 626 Advanced Educational Psychology (3)
- TE 640 Planning for Teaching and Assessment in Writing (3)
- TE 652 Change in Education (3) OR
- TE 655 Sociocultural Foundations of American Education (3)
- 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)**

**(Major Code: 08292) (SIMS Code: 331950)**

- 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)**

**(Major Code: 08292) (SIMS Code: 331951)**

- 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)**

**(Major Code: 08292) (SIMS Code: 331952)**

- 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 (3), 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)**

**(Major Code: 08292) (SIMS Code: 331953)**

- 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, cognitive disabilities, 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 certification and with additional coursework, can be eligible for California licensure as a professional counselor. 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. Specializations and certificate programs are available in Cognitive Disabilities, Psychiatric Rehabilitation, and Rehabilitation Technology.

**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 Four of this bulletin.

**Specific Requirements for the Master of Science Degree in Rehabilitation Counseling**

**(Major Code: 12221) (SIMS Code: 331009)**

In addition to meeting the requirements for classified graduate standing, and the basic requirements for the master's degree, as described in Part Four 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**

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.

Applicants interested in the school psychology program should refer to the section on the Ed.S. degree in school psychology.

Course offerings are organized by professional concentration. The majority are sequenced in year-long blocks. Most students attend full time (a minimum of nine units per semester), although limited part-time study is offered. 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 Four 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) (SIMS Code: 331001)**

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 Four 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

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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)
  - 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 (Major Code: 08261) (SIMS Code: 331006)

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 (Major Code: 08261) (SIMS Code: 331041)

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. 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:

- Prerequisites:
  - Admission to the university and the Department of Counseling and School Psychology for concentrated study in school counseling.
  - Related undergraduate coursework in anthropology, child development, cultural studies, education, ethnic studies, psychology, and sociology is recommended.
  - California Basic Educational Skills Test (CBEST) scores must be reported to the department.
  - 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.
- 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
- Foundations (minimum 6 units):
  - 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)
- 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 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)
- 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
- 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)

## Education

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

#### Multiple Subject Bilingual 2042 Credential (Elementary K-6 Education): Spanish, Arabic, Filipino, Japanese, and Mandarin Emphasis (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) California Basic Educational Skills Test (CBEST) scores;  
(3) Demonstration of Language and Cultural Proficiency:
- Spanish: Completion of PLC 415 or copies of CSET LOTE subtests III and V for Spanish language emphasis;
  - Japanese and Mandarin: Copy of CSET LOTE subtests III and V for language of emphasis;

- Arabic and Filipino: Copy of CSET LOTE subtests II and V for language of emphasis;

- (4) TB test results;  
(5) Three letters of recommendation, one of which must be from an elementary teacher if multiple subject or from a secondary teacher if single subject;  
(6) Verification of early field experience (30 hours for multiple subject) or completion of PLC 415;  
(7) Certificate of clearance (live scan);  
(8) CPR that includes infant/child/adult;  
(9) Autobiography/Goals and Philosophy. Candidates must complete a 1-1/2 page essay of their goals and philosophy in education and a 1-1/2 page autobiography in **language of emphasis and English**. Submit original and four sets of each essay with your PLC application;  
(10) California Subject Examination for Teachers (CSET) scores;  
(11) \$25 application processing fee.

#### Single Subject Bilingual 2042 Credential (Secondary Education Grades 7-12: Spanish Emphasis (Credential Code: 00100)

The following materials should be submitted by 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 or adviser recommendation;  
(3) California Basic Educational Skills Test (CBEST) scores;  
(4) Demonstration of Language and Cultural Proficiency:
- Spanish: Completion of PLC 415 or copies of CSET LOTE subtests III and V for Spanish language emphasis;
- (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 (45 hours for single subject) or completion of PLC 415;  
(8) Certificate of clearance (live scan);  
(9) CPR that includes infant/child/adult;  
(10) Autobiography/Goals and Philosophy. Candidates must complete a 1-1/2 page essay of their goals and philosophy in education and a 1-1/2 page autobiography in **language of emphasis and English**. Submit original and four sets of each essay with your PLC application;  
(11) \$25 application processing fee.

**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 bilingual 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*<br>(SB 2042)  | Teach in self-contained classrooms and provide Specially Designed Academic Instruction in English (SDAIE) and English Language Development (ELD), kindergarten through twelfth grade.   |
| 2. Multiple Subject (2042) Bilingual: Spanish**, Arabic, Filipino, Japanese, or Mandarin | Teach in self-contained classrooms in primary language and English, English Language Development (ELD), and Specially Designed Academic Instruction in English (SDAIE).                 |
| 3. Single Subject*<br>(SB 2042)  | Teach single subject area in grades K-12 and provide Specially Designed Academic Instruction in English (SDAIE) and English Language Development (ELD).                                 |
| 4. Single Subject Bilingual (2042) 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: | Teach special education students in the programs designated by each education specialist credential.                |
|                       | 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  |

\* 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/Bilingual) Credentials**

Departmental admission to Multiple Subject or Single Subject (SB 2042) credential program does not constitute admission to the university. Candidates who are entering the university for the first time, or who have graduated or who are graduating, and are planning to re-enroll for the credential program must file a separate application for admission to the university during the regular university application period.

**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, EBA-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 Performance Assessment for California Teachers (PACT).

### 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 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 Performance Assessment for California Teachers (PACT).
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: Public Health 101 or Teacher Education 280 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 500.
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 at <http://www.cbest.nesinc.com>. 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, post-baccalaureate program (see below), test scores must be submitted prior to admission to the program. 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 <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. **Teacher Education 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 attained a grade point average of at least 2.67 in all baccalaureate and post-baccalaureate coursework 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. One letter must be from a faculty member in the candidate's major, and one from an individual who knows the candidate well (but is 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 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. 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 is documented through the Early Field Experience Guide available for downloading from the School of Teacher Education Web site at:

<http://coe.sdsu.edu/ste/prospective/application.php>.

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 (two copies submitted in application) should address the following items:

- The candidate's interest in and motivation for a teaching career in a multicultural setting;
- The candidate's personal background and experience in working with children in multicultural settings;
- Other experiences personally considered important in the teacher preparation process;
- 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 letters 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, and a three semester 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.

		Units
TE 902	Classroom Management Skills . . . . .	1
TE 910A	Teaching Mathematics in the Elementary School . . .	3
TE 910B	Teaching Social Studies in the Elementary School . .	3
TE 910C	Teaching Science in the Elementary School . . . . .	3
TE 923	Psychological Foundations of Education . . . . .	3
TE 930	Teaching Reading and Language Arts in the Elementary School . . . . .	6
TE 960	Basic Student Teaching Seminar (Cr/NC) . . . . .	2
TE 961	Advanced Student Teaching Seminar (Cr/NC) . . . . .	2
TE 965	Basic Student Teaching in Elementary Schools (Cr/NC) . . . . .	8
TE 966	Advanced Student Teaching in Elementary Schools (Cr/NC) . . . . .	8
ED 970	Teaching Event Assessment (Cr/NC) . . . . .	3
EDTEC 470	Technologies for Teaching . . . . .	3
PLC 915A	Teaching and Learning in the Content Area: ELD/SDAIE: Multiple Subjects. . . . .	3
Total		48

**Variations on the Multiple Subject Credential Program  
Three Semester Block Option**

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, with two exceptions:

(1) The California Certificate of Clearance may still be pending at the time of admission to the Three Semester Block. This clearance must be granted by the State of California before the start of the second semester of this program.

(2) Students must have taken all of the CSET examination subtests for Multiple Subjects, but can be admitted to the Three Semester Block without completely passing this examination. Students must pass at least one subtest and be within 20 points (combined) of passing the other two subtests. The examination must be completely passed prior to starting student teaching in the third semester of the program. Candidates who have passed the CSET completely and who desire the Three Semester Block, will be given priority placement. Students in the Three Semester Block complete a four unit field experience course in their second semester, and a 12 unit student teaching assignment in their third semester. These two assignments will be assigned at differing grade levels, one in K-3 and one in 4-6.

The following is the sequence of courses students will take in the Three Semester Block:

**Semester 1**

	<b>Units</b>
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 . . . . .	3
EDTEC 470 Technologies for Teaching . . . . .	3
PLC 915A Teaching and Learning in the Content Area: ELD/SDAIE: Multiple Subjects. . . . .	3

**Semester 2**

	<b>Units</b>
TE 362 Fieldwork in Community Settings . . . . .	4
TE 902 Classroom Management Skills and PACT Seminar . . .	2
TE 910A Teaching Mathematics in the Elementary School . . .	3
TE 910B Teaching Social Studies in the Elementary School . . .	3
TE 930 Teaching Reading and Language Arts in the Elementary School . . . . .	3

**Semester 3**

	<b>Units</b>
TE 961 Advanced Student Teaching Seminar (Cr/NC). . . . .	2
TE 966 Advanced Student Teaching in Elementary Schools (Cr/NC/RP) . . . . .	12
ED 970 Teaching Event Assessment (Cr/NC) . . . . .	3

**Integrated Multiple Subject Preparation Program**

This program is not currently offered due to the suspension of SDSU spring admission. If the ability for spring admission returns, this program may be offered again.

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.

	<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
ED 970 Teaching Event Assessment (Cr/NC).....	3
EDTEC 470 Technologies for Teaching.....	3
PLC 915A Teaching and Learning in the Content Area: ELD/SDAIE: Multiple Subjects.....	2
<b>Total Units 35</b>	

For information on the Blended Integrated Program offered by the Imperial Valley campus, see the *Imperial Valley Campus Bulletin*.

**Multiple Subject Bilingual 2042  
Credential (Elementary K-6 Education):  
Spanish, Arabic, Filipino, Japanese, and  
Mandarin Emphasis**

**(Credential Code: 00200)**

The Multiple Subject Bilingual 2042 Credential (Elementary Grades K through 6 Education) is available to students interested in teaching in a bilingual Spanish, Arabic, Filipino, Japanese, or Mandarin elementary school classroom. This credential authorizes the holder to teach in any self-contained bilingual or regular classroom in which one teacher is responsible for all the subjects commonly taught in the elementary schools. Because courses on methods of teaching subject areas are taught in Spanish, Arabic, Filipino, Japanese, or Mandarin, as well as English, candidates must meet the respective language of emphasis proficiency requirements as outlined below.

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 bilingual teachers. The 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 Instruction-Bilingual"** in the application for graduate admission to SDSU (Code: 00200).

**Standards for Admission**

- 1. CBEST.** Students must pass the California Basic Educational Skills Test prior to admission to the BCLAD credential program. This examination is required by the California Commission on Teacher Credentialing. Booklets containing registration forms and test information are available at <http://www.cbest.nesinc.com>.
- 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 bilingual 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 <http://www.cset.nesinc.com>.

- 3. Prerequisite Courses.** The following courses must be completed with a grade of C- or better prior to admission to the program, but may be in progress at the time of application or taken in the term immediately prior to the program start date.

<i>Liberal Studies Majors.</i>		<b>Units</b>
PLC 515	Multilingual Education: Theory and Practice for Bilingual Teachers . . . . .	3
ED 451	Introduction to Multicultural Education . . . . .	3
SPED 500	Human Exceptionality . . . . .	3
TE 280	Health Education for Teachers. . . . .	1

*Non Liberal Studies Majors (must take the above and below prerequisites).*

\* MATH 210 Number Systems in Elementary Education. . . . . 3

\*With approval of the mathematics adviser, any of the following mathematics courses may be substituted for Mathematics 210: Mathematics 121, 150, 312.

- 4. Grade Point Average.** Candidates must have cumulative grade point averages (GPAs) within the upper one-half of undergraduate students in the candidates' majors. GPAs vary according to discipline and graduating institution. GPA requirements are available in the Policy Studies in Language and Cross-Cultural Education Department (PLC), EBA-248. Candidates are required to submit two sets of 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 three years. Evidence must be documented. Completion of PLC 415 can be used to meet this requirement.
- 8. Oral English and Written Statement of Professional Goals and Philosophy.** Have an interview with the admissions and retention committee of the PLC Department.
- 9. California Certificate of Clearance.** This certificate represents a background clearance and check conducted by the State Department of Justice and Federal Bureau of Investigation. Turn-around time for the clearance can take as long as eight months. Possessors of K-12 California credentials may satisfy this requirement by submitting copies of those certificates. 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 California Commission on Teacher Credentialing. Make appointment in EBA-248, telephone 619-594-5155.
- 11. Language and Culture Proficiency.** All candidates must demonstrate minimum Language Proficiency and Cultural Awareness for the language of emphasis to meet their specific Bilingual Authorization.

- 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 letters 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 523 Psychological Foundations for Bilingual Teachers in K-6 Classrooms . . . . .	3
PLC 532 Bilingual Teaching in Language Arts for Elementary Students. . . . .	3
PLC 902 Professional Portfolio (Cr/NC). . . . .	1
PLC 910 Teaching Mathematics to Bilingual Elementary Students . . . . .	3
PLC 911 Teaching Social Studies to Bilingual Elementary Students . . . . .	3
PLC 912 Teaching Science to Bilingual Elementary Students . . . . .	3
PLC 915A Teaching and Learning in the Content Area: English Language Development/SDAIE: Multiple Subjects . . . . .	3
PLC 931 Skills in Teaching Reading 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
ED 970 Teaching Event Assessment (Cr/NC) . . . . .	3
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 Multiple Subject/CSET.
4. Successful completion of Language Proficiency and Cultural Awareness Requirements for Language of Emphasis.
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. Demonstrated knowledge of the needs of and methods of providing educational opportunities to individuals with exceptional needs: Special Education 500.
9. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): Educational Technology 470 or Special Education 580.
10. Knowledge of health education in California, including substance abuse and nutrition: Teacher Education 280 – Health Education for Teachers (1 unit) and verification of CPR competency.
11. Successful completion of the Performance Assessment for California Teachers (PACT).

*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 Credential (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 bilingual 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 Bilingual Spanish and Special Education Emphasis” on the application for graduate admission to SDSU. Students can access the electronic application on line at: <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 prospective 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 (EBA-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 at <http://www.cbest.nesinc.com>.
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 bilingual credential program. To be admitted to the multiple subject bilingual 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 <http://www.cset.nesinc.com>.

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 .....	3
ED 451 or SPED 527 .....	3
SPED 500 .....	3
SPED 501 or PLC 523 .....	3
SPED 502 .....	1
SPED 524 .....	3
TE 280 .....	1

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. Candidates must submit live scan and personal information directly to the California Commission on Teacher Credentialing, <http://www.ctc.ca.gov>. A copy of the certificate of clearance must be provided to the PLC Department.

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 meet the minimum PLC Department Spanish Language Proficiency and Cultural Awareness requirement.

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 letters 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>
EDTEC 470 Technologies for Teaching . . . . .	3
PLC 523 Psychological Foundations for Biliteracy Teachers in K-6 Classrooms . . . . .	3
PLC 532 Biliteracy Teaching in Language Arts for Elementary Students . . . . .	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 931 Skills in Teaching Reading 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
ED 970 Teaching Event Assessment (Cr/NC) . . . . .	3

**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 Multiple Subject/CSET.
4. Passage of the Spanish Language Proficiency and Cultural Awareness Examination, or CSET LOTE, or Policy Studies in Language and Cross-Cultural Education 415.
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: Teacher Education 280 – Health Education for Teachers (1 unit) and verification of CPR competency.
12. Successful completion of the Performance Assessment for California Teachers (PACT).

*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**

**English language arts:** Comparative Literature, English

**Science:** Biology, Chemistry, 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 or through California Subject Examinations for Teachers (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.)
6. Knowledge of health education, including substance abuse and nutrition: Public Health 101, or Teacher Education 280, 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 or 500.
8. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): ETEC 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 (CBEST) prior to admission to the Single Subject Credential Program. Candidates are urged to take this examination as early as possible. Candidates are required to submit a photocopy of the individual score reports.
2. **Subject Matter Competency.** Students must verify competency in a specified single subject area through a university assessment process which consists of reviewing coursework for completion of an approved teaching major or its equivalent at San Diego State University or another approved California teacher-training institution, or by submitting passing scores on the appropriate California Subject Examinations for Teachers (CSET) examinations. 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 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 Single 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. **Teacher Education 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 attained a grade point average of at least 2.67 in all baccalaureate and post-baccalaureate coursework 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. One letter must be from a faculty member in the candidate's major, and one from an individual who knows the candidate well (but is 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 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. 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 is documented through the Early Field Experience Guide – Single Subject available for downloading from the School of Teacher Education Web site at: <http://coe.sdsu.edu/ste/prospective/application.php>. 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. Successful completion of the Performance Assessment for California Teachers (PACT).

**10. 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).

**11. Appeals Process.** Candidates who do not meet all the admission requirements may petition the Single Subject Admissions and Retention Committee for individual consideration; petition letters 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 a variety of formats called "blocks" to include full-time blocks over two semesters and a three semester block. 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 three semester block 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.

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 typically completes student teaching in two different grade levels; one assignment is at the middle school level (in grades 6-8) 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) . . . . .	3-4
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 . . . . .	3-4
TE 963 Secondary School Student Teaching I (Cr/NC/RP) . . . . .	4
TE 964 Secondary School Student Teaching II (Cr/NC/RP) . . . . .	12
ED 970 Teaching Event Assessment (Cr/NC) . . . . .	3
EDTEC 470 Technologies for Teaching . . . . .	3
PLC 915B Teaching and Learning in the Content Area: ELD/SDAIE: Single Subject. . . . .	3
<b>Total</b>	<b>40-43</b>

**Variations on the Single Subject Credential Program Three Semester Block Option**

To qualify for admission, candidates must have completed (1) a baccalaureate or higher degree and (2) the Admission Standards and Qualifications for the Single Subject Credential Program listed above, with two exceptions:

(1) The California Certificate of Clearance may still be pending at the time of admission to the Three Semester Block. This clearance must be granted by the State of California before the start of the second semester of this program.

(2) Students must have taken all of the CSET examination subtests for their subject area, but can be admitted to the Three Semester Block without completely passing this examination. Students must have attempted all required subtests in their subject area and passed the majority of them. Candidates who have passed the CSET completely and who desire the Three Semester Block, will be given priority placement. The examination must be completely passed prior to starting student teaching in the second semester of the program.

The following is the sequence of courses students will take in the Three Semester Block:

<b>Semester 1</b>		<b>Units</b>
TE 362	Fieldwork in Community Settings . . . . .	3
TE 954	Humanistic and Social Aspects of Teaching: Social Foundation . . . . .	3
EDTEC 470	Technologies for Teaching . . . . .	3
PLC 915B	Teaching and Learning in the Content Area: ELD/SDAIE: Single Subjects . . . . .	3
<b>Semester 2</b>		<b>Units</b>
TE 903	Secondary School Student Teaching Seminar (Cr/NC) . . . . .	1
TE 914	Teaching and Learning in the Content Area: Secondary Methods . . . . .	3
TE 922	Behavioral and Psychological Aspects of Teaching: Educational Psychology . . . . .	3
TE 933	Teaching of Reading in the Secondary School . . . . .	3
TE 963	Secondary School Student Teaching I (Cr/NC/RP) . . . . .	4
<b>Semester 3</b>		<b>Units</b>
TE 903	Secondary School Student Teaching Seminar: Methods (Cr/NC) . . . . .	1-2
TE 903	Secondary School Student Teaching Seminar: Advanced Student Teaching (Cr/NC) . . . . .	2
TE 966	Advanced Student Teaching in Elementary Schools (Cr/NC/RP) . . . . .	10
ED 970	Teaching Event Assessment (Cr/NC) . . . . .	3

Other requirements for issuance of the preliminary credential include the following:

**CPR Requirement:** All candidates for the preliminary credential are required to verify current training in cardiopulmonary resuscitation (CPR). Verification of the CPR training is made through submission of a photocopy of the card issued by the training agency. While many agencies provide CPR training, verification must be made at levels identified by the American Heart Association (AHA) or the American Red Cross (ARC). Candidates pursuing training through agencies other than these will be required to verify the level of training relative to either the AHA or ARC standards either from the data provided directly on their card or on a supplementary letter on letterhead stationary from their training agency (no phone call verifications).

## Single Subject Bilingual 2042 Credential (Secondary Education Grades 6 through 12): Spanish Emphasis

(Credential Code: 00100)

The Single Subject Bilingual (Spanish) Teaching Credential (Secondary Education) is available for students interested in teaching in a bilingual middle or 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 Credential Bilingual**” in the application for graduate admission to SDSU (Code: 00100). Students applying for admission should electronically submit the university application available at <http://www.csumentor.edu> along with the \$55 application fee.

### 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 <http://www.cbest.nesinc.com>.
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 are available at <http://www.cset.nesinc.com>.
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.
 

	Units
PLC 515 Multilingual Education: Theory and Practice for Bilingual Teachers . . . . .	3
ED 451 Introduction to Multicultural Education . . . . .	3
SPED 500 Human Exceptionality . . . . .	2
TE 280 Health Education for Teachers . . . . .	1
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.
11. **Language and Culture Examination.** All candidates must meet Language Proficiency and Cultural Awareness requirements for the language of emphasis to meet their specific bilingual authorization.
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 letters 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
SPED 450 Classroom Adaptations for Special Populations . . . . .	2
TE 280 Health Education for Teachers . . . . .	1
<b>First Semester</b>	
PLC 400 The Secondary School and Bilingual Education . . . . .	3
PLC 524 Psychological Foundations for Bilingual Teachers in Grades 7-12 . . . . .	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
ED 970 Teaching Event Assessment (Cr/NC) . . . . .	3
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 single subject bilingual 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. Successful completion of Language Proficiency and Cultural Awareness requirements for the language of emphasis.
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, Special Education 500.
9. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): Educational Technology 470 or Special Education 560.
10. Knowledge of health education in California, including substance abuse and nutrition: Teacher Education 280 – Health Education for Teachers (1 unit) and verification of current CPR competency.
11. Successful completion of the Performance Assessment for California Teachers (PACT).

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:

	<b>Units</b>
ED 690 Methods of Inquiry . . . . .	3
PLC 553 Language Assessment and Evaluation in Multicultural Settings . . . . .	3
PLC 600A 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.

**Multiple Subject and Single Subject Professional Clear Teaching Credential**

The San Diego State University, College of Education, Clear Credential Program is approved by the Commission on Teacher Credentialing (CTC) and is structured around support, collaboration, university coursework, action research, and formative assessment. The year-long program offers individualized support based on the candidate's instructional context and needs, develops deeper understandings of pedagogy, and advances knowledge and application of current universal access paradigms. Throughout the program, a cycle consisting of growth plan development, Planning for instruction, Instructing, Assessing student learning, Reflection, and Application to subsequent planning and instruction (PIARA) model of formative assessment occurs, integrating university coursework with practical action research in the candidate's classroom.

This coursework cannot be taken prior to issuance of the preliminary credential.

**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.

For additional information, contact Lisa McCully, Director of the Office of Student Services, in the College of Education at: [lmccully@mail.sdsu.edu](mailto:lmccully@mail.sdsu.edu).

**Reading/Language Arts Specialist Credential**

**(Credential Code: 00410)**

San Diego State University offers a program leading to a Reading/Language Arts Specialist Credential. This credential authorizes the holder to function as a reading specialist in grades K through 12.

**Requirements for Admission**

1. A valid California teaching credential applicable within the range of grades Kindergarten to 12.
2. A minimum of one year of full-time K-12 teaching experience or the equivalent within the range of grades Kindergarten to 12.
3. Submission of GRE scores.
4. Admission and planning interviews with an adviser.

**Core Program (32 Units)**

	<b>Units</b>
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 . . . . .	4

## Education

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

1. To be eligible to apply for the credential, the candidate must have a minimum of three years of full-time K-12 teaching experience within the range of grades Kindergarten to 12.
2. Satisfactory completion of a comprehensive examination covering the program coursework.

## 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, 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 Clear 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 with a passing score on the CSET: Multiple Subjects. Credential holders should see an adviser for clarification.

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.

### Preliminary Education Specialist Level I Credential Programs

1. Core courses: Special Education 505\*#, 553\*#^, 560, 662\*#^, 970, 980. Candidates are required to pass the Reading Instruction (RICA) Test.
2. Specialization courses:
  - a. **Mild/Moderate Disabilities:** Teacher Education 910A (2 units), 930 (3 units); Special Education 510^, 530^, 534, 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, 530, 635, 645, 647, 657, 970B, 980B; and 970B (for part-time students).
  - c. **Early Childhood Special Education:** Special Education 510, 526, 530, 635, 643A, 643B, 980D (Infant/Toddler), 980D (Preschool); and 970B (for part-time students).

\* Not required for Early Childhood Special Education.

# Those seeking severe emotional disabilities (SED) must take these courses.

^Those seeking autism authorization must take these courses.

### Clear Professional Level II Specialist Credential Programs Requirements for Admission

Candidates for any of the Clear Professional Level II 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 Education Specialist Level I 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.

#### 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:** Public Health 101, Teacher Education 280, 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 (Major Code: 99050) (SIMS Code: 331999)

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 (Major Code: 99049) (SIMS Code: 331998)

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.

## Education

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)

### Cognitive Disabilities Certificate

This certificate program is designed for current and aspiring rehabilitation counselors who are, or intend to become providers of vocational and independent living services on behalf of persons with cognitive disabilities, to include those with autistic spectrum disorders, intellectual disability, traumatic brain injuries, and learning disabilities. The certificate prepares rehabilitation counselors to work in the State/Federal vocational rehabilitation system, the U.S. Department of Veteran Affairs, California Regional Centers, or other government agencies supporting persons with cognitive disabilities, nonprofit community rehabilitation provider agencies, and student disability service programs of community colleges and universities.

**Prerequisites:** A bachelor's degree from an accredited institution with demonstrated experience in disability-related work and/or academic coursework. Students do not need to be enrolled in the SDSU Master of Science degree in rehabilitation counseling to enroll in the certificate program.

Required courses (18 units):

ARP 645A	Assessment in Rehabilitation (3)
ARP 680	Seminar in Administration, Rehabilitation and Postsecondary Education: Cognitive Disabilities (3)
ARP 687	Placement Practices with Individuals with Disabilities (3)
ARP 744	Practicum in Rehabilitation (3) Cr/NC
ARP 745	Internship in Rehabilitation (6) Cr/NC

ARP 680 and 744 are focused on cognitive disabilities and taught in alternating spring semesters so that each course is offered once every two years. The remaining required courses are offered annually. Students will complete 600 hours of internship in ARP 745 by either taking two three-unit (fall and spring semesters) or one six-unit ARP 745 course (one semester). The internship will be completed in a rehabilitation agency supporting persons with cognitive disabilities.

Students must complete 18 units with a 3.0 (B) grade point average. Students in the certificate program will complete nine units of formal coursework, three units of practicum, and six units of internship as described unless the program adviser approves alternative courses. Major assignments in all courses will focus on rehabilitation and cognitive disabilities, and the culminating assignment will be a comprehensive portfolio of work completed during the certificate.

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.

The program director will meet with each certificate student to design an individualized program of study based on the student's educational background and professional experience. Students may concurrently enroll in the certificate program and Master of Science degree in rehabilitation counseling. For further information call 619-594-6921.

### Community College Teaching Certificate

(Major Code: 99043) (SIMS Code: 330302)

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 Dr. Kendra A. Jeffcoat in the Department of Administration, Rehabilitation and Postsecondary Education (<http://www.interwork.sdsu.edu/arpe>).

### Developing Gifted Potential Certificate

(Major Code: 99043) (SIMS Code: 330305)

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, 771, and nine 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

(Major Code: 99044) (SIMS Code: 330303)

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 (9 units):

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 Biliteracy

(Major Code: 90301) (SIMS Code: 330306)

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, SB 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-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRIS) Certificate

The certificate program in Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRIS) is an interdisciplinary program focusing on professional preparation and skills enhancement of early childhood educators who work with young children who demonstrate socio-emotional and behavioral problems and their parents.

Eighteen program units are required to earn the certificate in Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRIS). Twelve units of seminar courses addressing core knowledge foundations and six units of practicum/field experience. Courses in the certificate program may be applied to the master's degree in child development if applicable.

Prerequisites for admission:

1. Successful completion of a bachelor's degree in a field related to child development, psychology, social work, human development, school counseling, or social services from an accredited institution, and relevant work experience in the early childhood education field.
2. Successful completion of the application and interview process.
3. Coursework relating to: early years of development, parenting, family functioning and parent-child relationships, children with special needs, and theories in socio emotional development. If students' undergraduate preparation is deemed insufficient, students will be required to complete specified courses as determined by the certificate program's adviser.
4. Recommendation of employer and/or director of certificate program.

Course requirements (18 units). The EC-SEBRIS certificate is modeled following the Delivery of Infant-Family and Early Mental Health Services Revised Training Guidelines and Personnel Competencies proposed by the California's Infant, Preschool and Family Mental Health Initiative (2003; Workforce 2008). It includes two main areas: knowledge and experience. The knowledge base is comprised of four foundation classes. Two practicum courses that include clinical experience/supervision in early childhood setting and programs accompanied by Reflective Practice Facilitation (total of 500 hours of supervised practicum).

Students must complete the course requirements with a minimum 3.0 (B) grade point average.

### Knowledge Area (12 units):

- CFD 670 Seminar in Child Development Theories – Intervention and Prevention (3)
- CFD 671 Seminar in Human Development: Positive Behavior Support for Young Children with Challenging Behavior (3)
- CSP 623 Ecobehavioral Assessment – Intervention (3)
- SPED 676 Advanced Applied Behavior Analysis (3)

### Experience Area – Field Experience/Practicum (6 units):

- CFD 697 Advanced Field Experiences Cr/NC  
(3 units each semester; 500 hours of supervised practicum).

For further information, contact the program adviser, Dr. Shulamit N. Ritblatt.

## Early Childhood Special Education Authorization Certificate

(Major Code: 99041) (SIMS Code: 330301)

The Early Childhood Special Education Authorization Certificate is authorized by the California Commission on Teacher Credentialing. It is designed for individuals who have completed Preliminary Education Specialist Level I coursework in Mild/Moderate or Moderate/Severe disabilities. It extends authorization from birth through 22. Individuals credentialed in other areas such as Deaf and Hard-of-Hearing 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 I 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.

## Educational Facility Planning (CEFPI/SDSU)

(Offered through the College of Extended Studies)

(Major Code: 90303) (SIMS Code: 331933)

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.

## Institutional Research, Planning, and Assessment Certificate

(Major Code: 90302) (SIMS Code: 330302)

The purpose of the certificate is to equip postsecondary administrators in two- and four-year institutions with the knowledge and skills to access, manage, and utilize input data, student information system generated data, outcome-based assessment results, and other benchmark indicators of institutional data in their decision-making processes. Students will learn how to collect, analyze, and report these data to inform institutional decision-making processes that would include decisions to improve curriculum, as well as decisions to reallocate resources and to inform external requests for funds.

Prerequisites: A bachelor's degree from an accredited institution with demonstrated experience in institutional research, enrollment management research, outcomes-based assessment, or planning.

## Education

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Required courses (12 units):

- ARP 611 Program Development and Evaluation in Postsecondary Education (3)
- ARP 725 Seminar in Institutional Planning, Analysis, and Assessment (3)
- ARP 727 Emerging Issues in Postsecondary Educational Leadership (3)
- ARP 760 Internship in Postsecondary Educational Leadership (3) Cr/NC/RP

Three units of ARP 760 will be completed in an institutional research and/or assessment setting.

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 may be repeated. Courses in the certificate program may be applied to a master's degree if applicable. Students may concurrently register in the certificate program and the Master of Arts degree in educational leadership, specialization in postsecondary education.

For further information, contact the program adviser, Dr. Marilee J. Bresciani, 619-594-8318.

### 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 Educational Web 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*.

### Primary Grade Writing Instruction Certificate

**(Major Code: 90300) (SIMS Code: 330304)**

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

**(Major Code: 90170) (SIMS Code: 330320)**

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 680 Seminar in Administration, Rehabilitation and Postsecondary Education: Psychiatric Rehabilitation (3)
- ARP 687 Placement Practices with Individuals with Disabilities (3)
- ARP 740 Advanced Seminar in Administration, Rehabilitation and Postsecondary Education: Psychiatric Rehabilitation (3)
- 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.

### Reading Certificate

This certificate is authorized by the California Commission on Teacher Credentialing and designed to improve K-12 classroom teacher and community college instructor expertise for literacy instruction from emergent through adolescence and adult levels. The 13-unit program addresses direct instruction in specific skills and strategies; formal and informal literacy assessment; knowledge about reading and writing across content areas; role of writing in learning; student motivation and engagement through reading, writing, and discussion. Courses for the reading certificate completed with a grade of B or better are also acceptable in partial fulfillment of the Master of Arts degree program in reading education and reading/language arts specialist credential programs, upon the candidate's acceptance into these programs. Students admitted to the Master of Arts in Teaching degree program can choose to complete the reading certificate as their area of concentration.

Required courses (13 units):

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)

Additional requirements:

To be eligible to apply for the Reading Certificate from the CCTC after completion of coursework, the candidate must also satisfy the following requirements:

1. A valid California teaching credential within the range of grades Kindergarten through 12.
2. A minimum of three years of full-time K-12 teaching experience within the range of grades Kindergarten through 12.

## Rehabilitation Administration Certificate

(Major Code: 90028) (SIMS Code: 330201)

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.

## Rehabilitation Counseling Certificate

(Offered through the College of Extended Studies)

(Major Code: 90056) (SIMS Code: 330203)

The Advanced Certificate in Rehabilitation Counseling is designed for current and aspiring rehabilitation counselors who are, or intend to become, holders of the certified rehabilitation counselor credential, per Category R established by the Commission on Rehabilitation Counselor Certification. The advanced certificate prepares holders to work in the California Department of Rehabilitation and other California vocational rehabilitation agencies, the United States Department of Veteran Affairs, California Regional Centers, or other government agencies supporting persons with disabilities, nonprofit community rehabilitation provider agencies, and student disability service programs in community colleges and universities.

Prerequisites: Applicants must possess a bachelor's degree and master's, specialist, or doctoral degree in one of 13 different majors from an accredited institution with demonstrated experience in disability-related work and/or academic coursework. Qualifying majors include: behavioral health; behavioral science; disability studies; human relations; human services; marriage and family therapy; occupational therapy; psychology; psychometrics; rehabilitation; social work; special education; vocational assessment/evaluation.

Students do not need to be in the SDSU Master of Science degree in Rehabilitation Counseling to register in the certificate program.

Required courses (18 units):

ARP 645A	Assessment in Rehabilitation (3)
ARP 660	Theory and Process of Counseling in Rehabilitation (3)
ARP 680	Seminar in Administration, Rehabilitation and Postsecondary Education: Disability Systems (3)
ARP 684	Rehabilitation Foundations (3)
ARP 685A	<b>OR</b>
ARP 685B	Medical and Psychological Aspects of Disability (3)
ARP 687	Placement Practices with Individuals with Disabilities (3)

Electives: If one or more of the required courses has been completed, substitute elective(s) can be taken with consent of the coordinator.

Students must complete the course requirements with a 3.0 (B) grade point average. Three units of coursework with a grade of "C" is applicable to the certificate program. Maximum three units of coursework can be repeated.

Students may be concurrently registered in the Advanced Certificate in Rehabilitation Counseling and the Master of Science degree in Rehabilitation Counseling. An individualized program of study based on the student's educational background and professional experience will be designed with the coordinator.

For further information, contact the program coordinator at 619-594-6921.

## Bilingual (Spanish) Special Education Certificate

(Major Code: 90026) (SIMS Code: 330101)

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.

## Supported Employment and Transition Specialist Certificate

(Major Code: 90030) (SIMS Code: 337501)

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

(Major Code: 90037) (SIMS Code: 335601)

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.

## Courses Acceptable on Master's and Doctoral Degree Programs in Education (ED)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs* sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### UPPER DIVISION COURSE

#### ED 516. Foundations of Bilingual Education (1) (Offered only at IVC)

Prerequisite: 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 690. Methods of Inquiry (3)

Procedures for gathering, analyzing, and synthesizing information; reviewing the literature; designing studies. Section selection to be made with department graduate adviser.

#### ED 696. Selected Topics in Community Influences on Learning and Curriculum Planning (1-3)

Prerequisite: Teaching experience.  
Intensive study in specific areas of education. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

#### ED 791A. Evaluation Techniques (3)

Prerequisites: Education 690 and advancement to candidacy for the master's degree.

Theory and practice of instructional program and product evaluation.

**ED 791B. Practicum: Evaluation (1-3)**

791B: Lecture.

Prerequisites: Education 791A and advancement to candidacy for the Master of Arts degree in education.

Supervised experience in conducting a program or product evaluation, strategy selection, procedures, reporting methods, culminating in a written project.

**ED 795A-795B. Seminar (3-3)**

Prerequisites: Education 690 and advancement to candidacy for the Master of Arts degree in education.

An intensive study in selected areas of education culminating in a written project. Limited to students following Plan B for the Master of Arts degree in education.

**ED 797. Research (1-3) Cr/NC/RP**

Prerequisites: Education 690 and advancement to candidacy for the master's degree.

Research in one of the fields of education. Maximum credit six units applicable to a master's degree.

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

Prerequisites: An officially appointed thesis committee and advancement to candidacy for the master's degree.

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

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

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

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

**ED 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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.

**ED 820. Advanced Educational Statistics (3-4)**

Prerequisites: Education 690, Teacher Education 646, or equivalent graduate level course and consent of graduate coordinator.

Theory and practice of statistical inference for research in education. Probability and sampling theory, data collection and organization, computer applications in educational research, statistical significance testing and prediction, use of statistical computer program libraries.

**ED 822. Seminar in Analysis and Issues in Race and Ethnic Relations (3)**

Prerequisite: Education 801.

Analysis of race and ethnic relations in education from a theoretical, research, and action based perspective. Conceptual framework of race, ethnicity, and prejudice theory needed for policies and strategies of reform in education to address unequal race relations.

**ED 823. Seminar in Action Oriented Policy Research in Multicultural Contexts (3)**

Prerequisite: Education 801.

Multidimensional ways to resolve social problems. Development of community based issues, analysis, research and implementation.

**ED 824. Seminar in Institutional Change in Multicultural Contexts (3)**

Prerequisite: Education 801.

Sociocultural dynamics of urban context, approaches for assessing institutional effectiveness, and strategies for developing and implementing educational innovations. Conceptual understanding of educational and social innovations that address multicultural context of school communities.

**ED 827. Seminar in Communication and Cognition in Education (3)**

Prerequisite: Admission to doctoral program.

Roots of communication in a diverse society. Relationship between cognition and communication including mass media, as well as cross-cultural, and personal modes.

**ED 834. Design and Development of Technology-Based Learning Systems (3)**

One lecture and four hours of activity.

Prerequisite: Education 810.

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**

Prerequisite: 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.

## Education

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### **ED 840. Seminar in Leadership in a Diverse Society (3)**

Prerequisite: 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.

### **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 study.

### **ED 855. Seminar in Leadership for Developing Educational Systems (3)**

Prerequisite: 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.

### **ED 860. Seminar in Leadership and Educational Change (3)**

Prerequisite: 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)**

Prerequisite: Admission to educational leadership doctoral program.

Effective monitoring of and evaluating systems for educational program improvement and policymaking. (Formerly numbered Educational Leadership 885.)

### **ED 895. Seminar (1-8)**

Prerequisite: Admission to the doctoral program or consent of the graduate coordinator.

Investigation of a particular topic or issue, emphasis on empirical research in education. See *Class Schedule* for specific content. Maximum credit eight units applicable to an advanced degree.

### **ED 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Independent investigation in the general field of the dissertation.

### **ED 899. Doctoral Dissertation (3-15) Cr/NC/RP**

Prerequisites: An officially constituted dissertation committee and advancement to candidacy.

Preparation of the dissertation for the doctoral program. Enrollment is required during the term in which the dissertation is approved.

## CREENTIAL COURSES

### **ED 970. Teaching Event Assessment (3) Cr/NC**

Prerequisite: Admission to teacher education or policy studies in language and cross-cultural education multiple or single subject credential program.

Tasks required for performance assessment teaching event: context of learning, planning instruction and assessment, instructing students and supporting learning, assessing student learning, and reflecting on teaching and learning.

### **ED 997. Special Topics in Education (0.5-6) (Offered only in Extension)**

Prerequisite: Consent of instructor.

Designed to meet the needs of teachers who wish to develop or continue the study of a current topic. May be repeated with new content.

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# Administration, Rehabilitation and Postsecondary Education

In the College of Education

**OFFICE: 3590 Camino del Rio North  
San Diego, CA 92108-1716**

**TELEPHONE: 619-594-6115**

**<http://interwork.sdsu.edu/arpe/>**

## Faculty

- Caren L. Sax, Ed.D., Professor of Administration, Rehabilitation and Postsecondary Education, Chair of Department (Graduate Adviser)
- Marilee J. Bresciani, Ph.D., 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., Professor of Administration, Rehabilitation and Postsecondary Education
- L. Ron Jacobs, Ph.D., Professor of Administration, Rehabilitation and Postsecondary Education, Emeritus
- Fred R. McFarlane, 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
- Charles E. Degeneffe, Ph.D., Associate Professor of Administration, Rehabilitation and Postsecondary Education (Graduate Adviser)
- Marjorie F. Olney, Ph.D., Associate Professor of Administration, Rehabilitation and Postsecondary Education
- Frank Harris, III, Ed.D., Assistant Professor of Administration, Rehabilitation and Postsecondary Education
- Kendra A. Jeffcoat, Ph.D., Assistant Professor of Administration, Rehabilitation and Postsecondary Education
- Shaila D. Mulholland, Ph.D., Assistant Professor of Administration, Rehabilitation and Postsecondary Education

## Courses Acceptable on Master's and Doctoral Degree Programs in Education (ARP)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### UPPER DIVISION COURSES

#### **ARP 565. Psychological Foundations of Adult and Vocational Education (3)**

Prerequisite: Administration, Rehabilitation and Postsecondary Education 380 or 381.

Learning processes of adult and vocational education students in relationship to theories of learning and methods of teaching.

#### **ARP 568. Adult and Vocational Education in Contemporary Society (3)**

Prerequisite: Administration, Rehabilitation and Postsecondary Education 565.

Contemporary adult and vocational education in the U.S. Learning opportunities and environments, instructional delivery systems, and adult learning models.

#### **ARP 596. Topics in Administration, Rehabilitation and Postsecondary Education (1-3)**

Selected 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 607. Applications of Rehabilitation Technology (3)**

Prerequisite: Admission to rehabilitation counseling program or consent of instructor.

Provide rehabilitation professionals with knowledge and skills to assess assistive technology needs of individuals with disabilities and match those needs with appropriate adaptations, equipment, and/or resources to expand employment and related quality of life opportunities. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 585.)

#### **ARP 610. Educational Leadership (3)**

Concepts and techniques of leadership, analysis of the factors and practice of individual and group leadership as applied to educational and related environments.

#### **ARP 611. Program Development and Evaluation in Postsecondary Education (3)**

Prerequisite: 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)**

Prerequisite: 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.

#### **ARP 620. Student Affairs in Higher Education (3)**

Historical roots, diversity of institutions and students; philosophical foundations of the field, guiding values, key legal principles and theoretical bases; functional areas within student affairs, their evolution, purpose, professional associations, standards, and current issues.

#### **ARP 621. Theoretical Foundations of Student Affairs (3)**

Prerequisite: 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)**

Prerequisite: 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.

## **Administration, Rehabilitation and Postsecondary Education**

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### **ARP 623. Seminar in Critical Leadership Issues in Student Affairs (3)**

Prerequisite: 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)**

Prerequisite: 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.

### **ARP 645A-645B. Assessment in Rehabilitation (3-3)**

Prerequisite: Admission to graduate program in rehabilitation counseling.

Rehabilitation assessment, labor market information, and career planning implications. Current assessment approaches, counseling, and career theories related to individuals with disabilities.

### **ARP 648. Group Dynamics in Rehabilitation (3)**

Prerequisite: Admission to graduate program in rehabilitation counseling.

Theory, dynamics, process and leadership function as applied to group work in rehabilitation. Development and application of group leadership skills/techniques for adjustment, support, skill training, self-directed groups, organizational problem solving and team-building groups in rehabilitation.

### **ARP 660. Theory and Process of Counseling in Rehabilitation (3)**

Counseling theories, approaches to and techniques for counseling, and research concerning counseling effectiveness.

### **ARP 680. Seminar in Administration, Rehabilitation and Postsecondary Education (2-6)**

Prerequisite: Consent of instructor.

Study of administration, rehabilitation, or postsecondary education in a specialized field, such as a postsecondary institution, and subject fields, or designated services. Field experience when appropriate. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

### **ARP 684. Rehabilitation Foundations (3)**

Background and legislation related to vocational rehabilitation, consumer services, role and function of rehabilitation counselor as a professional. Orientation to community rehabilitation agencies. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 584.)

### **ARP 685A-685B. Medical and Psychological Aspects of Disability (3-3)**

Prerequisite: Open to rehabilitation graduate students and practitioners.

Interface of the individual and the environment covering disabilities from the perspective of each disability viewed in terms of functional capacities and rehabilitative services needed.

### **ARP 687. Placement Practices with Individuals with Disabilities (3)**

Prerequisite: 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)**

Prerequisite: Twelve units in administration, rehabilitation and postsecondary education.

Intensive study in specific areas of administration, rehabilitation and postsecondary education. May be repeated with new content. See *Class Schedule* for specific content. 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)**

Prerequisite: Completion of at least 24 units leading to Master of Science in rehabilitation counseling or enrollment in Rehabilitation Administration Certificate.

Selected topics with emphasis in research in rehabilitation counseling and/or administration. See *Class Schedule* for specific content.

### **ARP 720. Human Resource Development in Postsecondary Education (3)**

Prerequisite: Consent of instructor.

Human resource development including selection and evaluation of staff, contract management, and staff development. Personnel managerial styles, staff leadership, and motivation techniques as to morale and productivity. Analysis of educational personnel systems and employee programs.

### **ARP 725. Seminar: Institutional Planning, Analysis, and Assessment (3)**

Prerequisite: Administration, Rehabilitation and Postsecondary Education 727.

Knowledge and skills for utilizing institutional and national data for student recruitment and institutional planning.

### **ARP 727. Emerging Issues in Postsecondary Educational Leadership (3)**

Prerequisite: Consent of instructor.

Identification and analysis of emerging local, national, and international issues impacting education.

### **ARP 730. Seminar in Adult Learning (3)**

Patterns and implications of life-long learning. Emphasizes adult learning principles and styles, effects of adult development changes on learning, and teaching techniques in adult education programs.

### **ARP 740. Advanced Seminar in Administration, Rehabilitation and Postsecondary Education (3)**

Prerequisite: Consent of instructor.

Study of a selected area in administration, rehabilitation or postsecondary education, such as educational law, finance, supervision, personnel procedures, etc. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit nine units applicable to a master's degree.

### **ARP 743. Fieldwork in Rehabilitation (3-6) Cr/NC**

Prerequisite: Admission to graduate program in rehabilitation counseling.

Orientation to the rehabilitation process including organizational goals, operating strategies, responsibilities and ethics, employee role expectations in partnership with consumers and service providers. Maximum credit six units applicable to a Master of Science degree in rehabilitation counseling.



**ARP 744. Practicum in Rehabilitation (3-12) Cr/NC**

Prerequisite: Admission to graduate program in rehabilitation counseling.

Clinical supervision within rehabilitation systems as it relates to outreach and referral, career development, counseling, and caseload management. Maximum credit 12 units applicable to a Master of Science degree in rehabilitation counseling.

**ARP 745. Internship in Rehabilitation (3-9) Cr/NC**

Prerequisite: Completion of at least 24 units leading to Master of Science in rehabilitation counseling.

Supervised internship in rehabilitation setting which involves application of rehabilitation counseling experiences. Maximum credit of nine units applicable to a Master of Science degree in rehabilitation counseling or enrollment in the Rehabilitation Administration Certificate.

**ARP 746. Seminar in Rehabilitation with Consumers Who Are Deaf and Hard of Hearing (3)**

Prerequisite: Consent of instructor.

Characteristics and needs of deaf and hard of hearing consumers. Procedures for collaborating with consumers to develop effective rehabilitation plans, supported employment, independent living and cross-cultural counseling through American sign language.

**ARP 747. Educational Leadership in a Diverse Society (3)**

Prerequisite: Consent of instructor.

Current theory and practice in meeting needs of diverse learners. Leadership and administration of educational organizations as political, complex systems requiring consensus-building dynamics in a multicultural society.

**ARP 755. Governance and Policy Development in Postsecondary Learning Organizations (3)**

Prerequisite: Consent of instructor.

Development of educational policy and impact of politics in governance and administration; control functions of federal, state, and local agencies; influence of lay citizens and special interest groups; roles of judiciary, employee organizations and students.

**ARP 760. Internship in Postsecondary Educational Leadership (1-6) Cr/NC/RP**

Prerequisite: Consent of instructor.

Internship for prospective educational leaders. Released time may be required. May be repeated with new content. See *Class Schedule* for specific content. 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.

**DOCTORAL COURSES**

**ARP 801. Seminar in Community College History and Development (3)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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.

**ARP 827. Seminar in Emerging Issues in Postsecondary Educational Leadership (3)**

Prerequisite: Admission to educational leadership doctoral program.

Identification and analysis of complex emerging local, national, and international issues that face high level postsecondary educational leaders.

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# Counseling and School Psychology

In the College of Education

**OFFICE: North Education 179**  
**TELEPHONE: 619-594-6109 / FAX: 619-594-7025**  
**<http://edweb.sdsu.edu/csp/>**

## Faculty

Valerie J. Cook-Morales, Ph.D., Professor of Counseling and School Psychology, Chair of Department  
Colette L. Ingraham, Ph.D., Professor of Counseling and School Psychology (School Psychology Graduate Adviser)  
Gerald Monk, Ph.D., Professor of Counseling and School Psychology  
Carol A. Robinson-Zañartu, Ph.D., Professor of Counseling and School Psychology, Emerita  
Maria Nieto Senour, Ph.D., Professor of Counseling and School Psychology, Emerita  
Nola M. Butler-Byrd, Ph.D., Associate Professor of Counseling and School Psychology (Community Based Block Graduate Adviser)  
Tonika D. Green, Ph.D., Associate Professor of Counseling and School Psychology  
Patricia A. (Trish) Hatch, Ph.D., Associate Professor of Counseling and School Psychology (School Counseling Graduate Adviser)  
Soh-Leong Lim, Ph.D., Associate Professor of Counseling and School Psychology  
Brent A. Taylor, Ph.D., Associate Professor of Counseling and School Psychology (Marriage and Family Therapy Graduate Adviser)  
Katina Lambros Ortega, Ph.D., Assistant Professor of Counseling and School Psychology

## Courses Acceptable on Master's Degree Programs in Counseling (CSP)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### UPPER DIVISION COURSE

#### CSP 596. Selected Studies (1-3)

Prerequisite: Consent of instructor.  
A series of lecture and discussion sessions centering on current problems in counseling and guidance. Designed to serve the needs of any person desiring to keep informed of developments in this area. May be repeated with new content. See *Class Schedule* for specific content. 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)

Prerequisite: Concurrent registration in Counseling and School Psychology 600L.  
Concepts underlying effective cross-cultural counseling practice and interpersonal communication. Development of skills basic to practice of counseling, consultation, and marriage-family therapy.

#### CSP 600L. Cross-Cultural Counseling Prepracticum (1) Cr/NC

Prerequisite: Credit or concurrent registration in Counseling and School Psychology 600.

Development of self-understanding. Cross-cultural communication skills needed for becoming an effective counselor. May be repeated with new content. Maximum credit three units applicable to a master's degree in counseling.

#### CSP 601. Theoretical Foundations of Counseling and Marriage and Family Therapy (3)

Prerequisites: Counseling and School Psychology 600 and 600L.  
Counseling and marriage and family therapy theories and their impact on the practices of counselors, school 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)

Prerequisite: Bachelor's degree.  
Historical and philosophical origins of current theories and practices. Types of trauma affecting children, communities of color, elderly, crime victims, and others. Implications for treatment considered.

#### CSP 615. Seminar in Multicultural Dimensions in Counseling (3)

Issues, insights, and techniques for improving effectiveness in working with culturally diverse populations.

#### CSP 616. Seminar in Alternative, Indigenous, and Community Healing Modalities: Trauma (3) (Offered only in Extension)

Prerequisite: Bachelor's degree.  
Different healing modalities reflecting different world views. Indigenous, modern, and non-western alternative theories, practices, and techniques.

**CSP 618. Contexts of Psychopathology (3)**

Prerequisite: Counseling and School Psychology 601.

Descriptions of mental health disorders within biological, individual, familial, and larger social contexts. Focus on Diagnosis and Statistical Manual of Mental Disorders classification system and relationship to family functioning.

**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)**

Prerequisite: Counseling and School Psychology 601.

Historical and empirical foundations of marriage and family therapy. Classic systemic theoretical models of practice from vantage point of assessment. Related change strategies and techniques.

**CSP 625L. Marriage and Family Therapy Theories in Practice I (1)**

Prerequisites: Counseling and School Psychology 601. Concurrent registration in Counseling and School Psychology 625.

Application of marriage and family therapy theories introduced in Counseling and School Psychology 625 to therapy practice through simulation and skill-building activities.

**CSP 626. Theories of Marriage and Family Therapy II (3)**

Prerequisites: Counseling and School Psychology 625 and 625L.

Contemporary marriage and family therapy theories including: post-modern ideas, such as narrative therapy and collaborative language systems, integrative and evidence-based approaches; alternative approaches to family therapy, such as coaching and mediation.

**CSP 626L. Marriage and Family Therapies in Practice II (1)**

Prerequisites: Counseling and School Psychology 625, 625L. Concurrent registration in Counseling and School Psychology 626.

Application of postmodern theories and integrative theories in practice through simulation and skill-building activities.

**CSP 635. Sexuality and Intimacy in Couple and Family Therapy (2)**

Prerequisites: Counseling and School Psychology 625, 625L.

Approaches to understanding sexual functioning and intimacy through multicultural, historical, and relational clinical theory frameworks. Specific sexual issues presented in therapy, treatment planning, and intervention. Fulfills marriage and family therapy licensure requirement.

**CSP 640. Testing and Assessment for Marriage and Family Therapists (2)**

Prerequisite: Education 690.

Theory and application of individual and relationship assessment instruments in marriage and family therapy practice. Test development processes. Cultural factors in testing and interpretation. Current uses of tests in mental health, educational, and legal institutions. (Formerly offered as Counseling and School Psychology 640, Theories and Process of Appraisal, 3 units.)

**CSP 641. Psychometrics in Counseling and School Psychology (1)**

Prerequisite: Education 690.

Psychometric underpinnings of standardized testing. Application of group achievement testing, behavior rating scales, and self-concept tests in counseling and psychological services in multicultural schools. Includes current issues (e.g. impact of high-stakes testing on services, legal mandates, ethical issues).

**CSP 643. Psychoeducational Evaluation Techniques (1) Cr/NC**

Prerequisite: Counseling and School Psychology 641.

Theories and concepts underlying psychoeducational evaluation in multicultural schools. Administration and interpretation of instruments and techniques for psychoeducational evaluation of children and adolescents.

**A.** Psychological Processing

**B.** English – Learners

**C.** Spanish – Speakers (proficiency required)

**CSP 644. Academic Assessment - Intervention (3)**

Prerequisites: Counseling and School Psychology 622A and 641. Concurrent registration in Counseling and School Psychology 730 or 740.

Current concepts of prevention and intervention strategies for students placed at risk for academic difficulties in multicultural schools. Skills in assessment of academic achievement (standardized and authentic), linked to empirically supported intervention strategies, evaluation of intervention effectiveness.

**CSP 645. Career Development (1)**

Prerequisites: Counseling and School Psychology 620 and admission to school counseling program.

Theories, methods, and models of career assessment and comprehensive career development programs in K-12 multicultural school settings. Role of 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)**

Prerequisite: Bachelor's degree.

Helping skills for managing mental well-being in crisis and critical incident situations; develop practical skills for working in traumatic emergency situations; learn suicide prevention, intervention, and follow-up.

**CSP 662. Counseling Interventions with Children and Adolescents (3)**

Prerequisites: Counseling and School Psychology 601 and 610C.

Counseling theories, processes and approaches appropriate to children and adolescents in multicultural school and community settings. Application of theories and research for individual, group, family and larger systems interventions.

**A.** Marriage and Family Therapy

**B.** School Counseling and School Psychology

## Counseling and School Psychology

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### **CSP 665. Seminar in Traumatized Children and Families (3)** **(Offered only in Extension)**

Prerequisite: Bachelor's degree.

Differences between normal and traumatized patterns of grief; traumatizing experiences for children and impact on family. Culturally relevant, research supported interventions, and community resources.

### **CSP 670. Theory and Process of Group Counseling (3)**

Prerequisites: Counseling and School Psychology 600 and 600L.

Group process, theories of group interaction, and group leadership techniques with children, adolescents, adults, couples, and families.

### **CSP 680. Theory and Process of Consultation (3)**

Prerequisites: Counseling and School Psychology 600 and 600L.

Consultation theory, process, and research for counselors and school psychologists. Emphasis on mental health and problem-solving consultation in multicultural education and mental health settings.

### **CSP 686. Seminar 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)**

Prerequisite: Counseling and School Psychology 625.

Systemic models of intervention for families and couples presenting problems related to substance abuse. Includes treatment issues of interdependence, power, intimacy, generational patterns, addiction, and relapse. Fulfills marriage and family therapy licensure requirement.

### **CSP 688. Family Systems Assessment of Child Abuse (1)**

Prerequisite: Counseling and School Psychology 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)**

Prerequisite: Counseling and School Psychology 625.

Sociocultural, developmental, family and individual contexts of violence in couples' relationships. Assessment with a focus on systemic ideas and practices. Legal, ethical, and person-of-the-therapist influences on assessment. Fulfills marriage and family therapy licensure requirement.

### **CSP 692. Seminar in Couples in Therapy (2)**

Prerequisites: Counseling and School Psychology 609, 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)**

Prerequisite: Counseling and School Psychology 618.

Medical, cultural, systemic perspectives on use of psychopharmacology in marriage and family therapy practice. Overview of most commonly used drugs in psychotherapeutic treatment. Fulfills marriage and family therapy licensure requirement.

### **CSP 696. Selected Topics in Counseling and School Psychology (1-3)**

Prerequisite: Consent of instructor.

Intensive study in specific areas of counseling and school psychology. May be repeated with new content. See *Class Schedule* for specific content. 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)**

Prerequisite: Bachelor's degree.

Variable topics, addressing issues of trauma and special populations. Examples include: Grief and loss in refugee children; children and families as victims of crime; intergenerational trauma and Jewish holocaust survivors; Native American transgenerational traumatic stress and emergent interventions; African American behavioral change model. Maximum credit three units.

### **CSP 710A-710B. Professional Seminar (3-3)**

Prerequisites: Education 690. Six units from Counseling and School Psychology 601, 640, and 670.

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**

Prerequisite: 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**

Prerequisite: 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.

Prerequisite: 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 nine units applicable to a master's or Ed.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**

Prerequisite: Counseling and School Psychology 755.

Advanced supervised experience in relationship and family therapy under live supervision. Advanced techniques and treatment planning. Clinical hours may be counted toward 500 clinical hours and marriage and family licensure eligibility requirement. May be repeated with additional clinical training experience. Maximum credit three units applicable to a master's degree.

**CSP 770. Advanced Seminar in Counseling (3)**

Prerequisite: Advancement to candidacy or counseling experience.

Selected areas in counseling culminating in a written project with emphasis on research, problems, and issues. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

**CSP 780. Internship (2-12) Cr/NC**

Prerequisite: Counseling and School Psychology 730.

Supervised internship experience in counseling or school psychology activities. Application to take the course must be made early during the preceding semester. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree. Maximum credit 24 units applicable to the specialization in school psychology.

**CSP 785. Marriage and Family Therapy Traineeship (1-10) Cr/NC**

Prerequisite: Counseling and School Psychology 755.

Community-based clinical marriage and family therapy experience, with AAMFT approved supervisor or equivalent. Individual and group supervision at site and on campus. Clinical hours may be counted toward 500 clinical hours and marriage and family therapy licensure eligibility requirement. May be repeated with new content. Maximum credit ten units.

**CSP 790A. Specialist's Project in School Psychology (3) Cr/NC/RP**

Prerequisite: 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**

Prerequisite: 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**

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

Individual study. Maximum credit six units applicable to a master's degree. May involve fieldwork.

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

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**

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

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

**CSP 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's or Ed.S. degree. Registration in 799C limited to two semesters.

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# Educational Leadership

In the College of Education

**OFFICE: North Education 166**

**TELEPHONE: 619-594-4063**

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

**<http://edweb.sdsu.edu/edleader/>**

## Faculty

Patti L. Chance, Ph.D., Professor of Educational Leadership,  
Chair of Department

Margaret R. Basom, Ph.D., Professor of Educational Leadership,  
Emerita

Kathleen C. Cohn, Ph.D., Professor of Educational Leadership,  
Emerita

Joseph F. Johnson, Ph.D., Professor of Educational Leadership

Lionel R. Meno, Ph.D., Professor of Educational Leadership, Emeritus

Ian R. Pumpian, Ph.D., Professor of Educational Leadership

Cynthia L. Uline, Ph.D., Professor of Educational Leadership,  
Co-Director of Ed.D. in Educational Leadership with  
Concentration in PreK-12 School Leadership

Cheryl M. James-Ward, Ed.D., Assistant Professor of Educational  
Leadership

Kathryn A. Singh, Ed.D., Assistant Professor of Educational  
Leadership

## Courses Acceptable on Master's and Doctoral Degree Programs in Education (EDL)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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 preK-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) Cr/NC**

Prerequisite: Consent of instructor.

Educational administration in preK-12 schools and school districts. Field experience when appropriate. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

**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 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**

Prerequisite: Consent of instructor.

Internship for preK-12 educational administrators. Application to take this course must be made in the preceding semester by preregistration with the credential program coordinator. Released time may be required. May be repeated. Maximum credit 12 units applicable to the Professional Administrative Services Credential.

**EDL 798. Special Study (1-6) Cr/NC/RP**

Prerequisite: Consent of staff; to be arranged with department chair and instructor. May involve fieldwork.

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

**DOCTORAL COURSES**

**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)**

Prerequisite: 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)**

Prerequisite: 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

In the College of Education

**OFFICE: North Education 280**

**TELEPHONE: 619-594-6718 / FAX: 619-594-6376**

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

## Faculty

Marcie J. Bober-Michel, Ph.D., Professor of Educational Technology,  
Chair of Department (Graduate Adviser)

Bernard J. Dodge, 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

## Courses Acceptable on Master's Degree Program in Education (EDTEC)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### UPPER DIVISION COURSES

#### EDTEC 532. Producing Digital Learning Media (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 master's degree or certificate programs.

#### EDTEC 540. Educational Technology (3)

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. Educational Web Development (3)

One lecture and six hours of laboratory.

Prerequisite: Basic computer literacy.

Systems, graphic design, and usability principles applied to design and development of web-based educational multimedia. Planning and prototyping digital media.

#### EDTEC 544. Instructional Design (3)

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 analyses and content mapping to set instructional goals. Instructional methods derived from learning theories for use in schools, universities, corporations, and other settings. Rapid prototyping of instructional products.

#### EDTEC 561. Advanced Web-Based Multimedia Development (3)

Six hours of activity.

Prerequisites: Educational Technology 540 and 541.

Educational visualization with digital video, animation, sound, 2D and 3D graphics for mobile and web-based learning.

#### EDTEC 570. Advanced Teaching with Technologies (3)

Prerequisite: Educational Technology 470 or equivalent work experience.

Design of project-based and problem-based learning using Internet resources. Constructivist learning with online databases. Collaboration with distant classrooms and experts.

#### EDTEC 572. Technology for Course Delivery (3)

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. Strategies for integrating audience response systems, collaborative tools, and social software into courses.

#### EDTEC 590. Evaluation Techniques for Performance Technologist (3)

Two lectures and three hours of activity.

Prerequisites: Educational Technology 540 and 541. Recommended: Education 690.

Design and use of tools to collect, analyze, and communicate data about learning and performance.

#### EDTEC 596. Topics in Educational Technology (1-3)

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)

Six hours of activity.

Prerequisite: Educational Technology 544.

Principles of human learning and cognition applied to design and use of technology-based learning systems. Development of research-based guidelines for designing educational products and services.

#### EDTEC 650. Distance Education (3)

Two lectures and three hours of laboratory.

Prerequisite: Educational Technology 561. Recommended: Educational Technology 572.

Theories and models of online learning at home, work, and school. Use of systems dynamics in design, development, and evaluation of e-learning courses and self-adaptive online educational systems. Future societal and economic impacts of learning at a distance.

#### EDTEC 670. Exploratory Learning Through Simulation and Games (3)

One lecture and six hours of laboratory.

Prerequisites: Educational Technology 540 and 541.

Design, evaluation, and use of simulations and games for education and training. Instructional applications of role plays, board games, and multiplayer virtual worlds. Theories of motivation and interest.

#### EDTEC 671. Learning Environment Design (3)

One lecture and six hours of laboratory.

Prerequisites: Educational Technology 544 and 561.

Design and development of individualized instruction delivered through e-learning; learning management systems; informal learning for corporate and museum education.

#### EDTEC 684. Management of Educational Technology (3)

Six hours of activity.

Prerequisite: Educational Technology 540. Recommended: Educational Technology 544.

Management of instructional design and performance interventions. Development of timelines, staffing plans, communication strategies, and budgets.



**EDTEC 685. Informational and Instructional Technologies for Organizations (3)**

Six hours of workshop and activities.

Prerequisites: Educational Technology 540 and 541.

Organizational and informational systems that support instructional products and services. Individual, team, and organizational analyses. Incentives, feedback, coaching, job-aids, selection, knowledge management, and other performance improvement strategies.

**EDTEC 700. Seminar in Educational Technology (1-3)**

Prerequisite: Educational Technology 540.

Selected areas, topics in educational technology. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

**EDTEC 775. Directed Internship in Educational Technology (2-6) Cr/NC**

Prerequisite: 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**

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

Individual study. May involve fieldwork. Maximum credit six units applicable to a master's degree.



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# Policy Studies in Language and Cross-Cultural Education

In the College of Education

**OFFICE: Education and Business Administration 248**

**TELEPHONE: 619-594-5155 / FAX: 619-594-1183**

**<http://edweb.sdsu.edu/PLC/>**

## Faculty

Karen Cadiero-Kaplan, Ph.D., Professor of Policy Studies in Language and Cross-Cultural Education, Chair of Department (Graduate Adviser)

Alberto M. Ochoa, Ph.D., Professor of Policy Studies in Language and Cross-Cultural Education, Emeritus

Alberto J. Rodriguez, Ph.D., Professor of Policy Studies in Language and Cross-Cultural Education

Cristina Alfaro, Ph.D., Associate 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

## Courses Acceptable on Master's Degree Programs in Education (PLC)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### UPPER DIVISION COURSES

#### **PLC 515. Multilingual Education: Theory and Practice for Biliteracy Teachers (3)**

Pedagogical and programmatic practices for addressing linguistic and academic needs of multilingual learners. Historical and theoretical foundations of bilingual education as related to bilingual and dual language programs to include instruction, curriculum, and assessment. Taught in Spanish and English.

#### **PLC 523. Psychological Foundations for Biliteracy Teachers in K-6 Classrooms (3)**

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. (Formerly numbered Policy Studies in Language and Cross-Cultural Education 923.)

#### **PLC 524. Psychological Foundations for Biliteracy Teachers in Grades 7-12 (1-4)**

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. (Formerly numbered Policy Studies in Language and Cross-Cultural Education 924.)

#### **PLC 532. Biliteracy Teaching in Language Arts for Elementary Students (3)**

Prerequisites: Policy Studies in Language and Cross-Cultural Education 415 and 515.

Assessing language proficiency; selecting, designing, and evaluating learning experiences to develop biliteracy in K-6 classrooms in English language arts and Spanish, Arabic, Filipino, Japanese, or Mandarin. Taught bilingually in language of emphasis and English. (Formerly numbered Policy Studies in Language and Cross-Cultural Education 932.)

#### **PLC 553. Language Assessment and Evaluation in Multicultural Settings (3)**

Theories and methods of assessment and evaluation of diverse student populations including authentic and traditional models. Procedures for identification, placement, and monitoring of linguistically diverse students. Theories, models, and methods for program evaluation, achievement, and decision making.

#### **PLC 596. Special Topics in Bilingual and Multicultural Education (1-3)**

Prerequisite: Consent of instructor.

Selected topics in bilingual, cross-cultural education and policy studies. 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)**

Prerequisite: Consent of instructor.

Analysis of relationships among ideology, culture, and power in educational context; key concepts in critical pedagogy applied to programs, curricula, and school restructuring. (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)**

Prerequisite: Consent of instructor.

Formal and informal policies related to education of linguistically diverse students at micro/macro level and in school contexts; analysis of bilingual and cross-cultural issues in cognition and literacy. (Formerly numbered Policy Studies in Language and Cross-Cultural Education 653.)

#### **PLC 602. Culturally Responsive Pedagogy for School Communities (3)**

Prerequisite: Policy Studies in Language and Cross-Cultural Education 601.

Examination of diverse cultural competence values and behaviors urban and ethno-linguistically diverse students bring to school. Status equalization, sociolinguistic repertoire within learning situations, how curriculum, policy, and practices impact diverse individuals and institutions.

#### **PLC 603. Community and Schools in a Diverse Society (3)**

Prerequisite: 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)**

Prerequisite: Policy Studies in Language and Cross-Cultural Education 601.

Leadership and change strategies for designing and implementing instructional programs, professional development approaches, effective organizational school climate that promotes a democratic society and schooling.

**PLC 650. 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: Consent of instructor.

Topics dealing with current issues in multicultural education. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

**PLC 798. Special Study (1-6) Cr/NC/RP**

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

Individual study. May involve fieldwork. Maximum credit six units applicable to a master's degree.

**CREDENTIAL COURSES**

**PLC 902. Professional Portfolio (1) Cr/NC**

Prerequisite: Admission to Bilingual 2042 Multiple Subject credential program.

Portfolio development: Components on reflective teaching; models for teaching approaches, strategies, and methodologies in all subject areas. Maximum credit three units.

**PLC 903. Bilingual Secondary Student Teacher Seminar (3-4) Cr/NC**

Prerequisites: Policy Studies in Language and Cross-Cultural Education 524, 954, and concurrent registration in Policy Studies in Language and Cross-Cultural Education 964.

Planning and organizing instruction for Spanish/English bilingual and nonbilingual student teaching assignments. Focus on role of the bilingual teacher and discipline specific methods in English, ESL, mathematics, science, social science, and foreign language. Course taught in Spanish and/or English.

**PLC 910. Teaching Mathematics to Bilingual Students (1-3)**

Prerequisite: Admission to Bilingual 2042 Multiple Subject credential program.

Underlying learning theories for teaching mathematical concepts, computation, and problem-solving skills to bilingual students.

**PLC 911. Teaching Social Studies to Bilingual Students (1-3)**

Prerequisite: Admission to Bilingual 2042 Multiple Subject credential program.

Conceptual approaches for teaching bilingual social studies curriculum, incorporating sociocultural characteristics of multicultural community, social concepts, and community social issues.

**PLC 912. Teaching Science to Bilingual Students (1-3)**

Prerequisite: Admission to Bilingual 2042 Multiple Subject credential program.

Strategies for development of process skills and concept acquisition. Methodology for teaching activity-oriented science class bilingually.

**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 Bilingual 2042 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 931. Skills in Teaching Reading to Bilingual Elementary Students (1-3)**

Prerequisite: Admission to Bilingual 2042 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 933. Skills in Teaching Reading to Bilingual Secondary Students (3)**

Prerequisites: Upper division standing. Admission to Bilingual 2042 Single Subject credential program.

Methods for developing reading skills in Spanish and English across subject areas. Includes comprehension, academic vocabulary, concept development, reading strategies, and assessment. Taught in Spanish and/or English.

**PLC 953. Language Development in Bilingual Secondary Classrooms (3)**

Prerequisite: Admission to Bilingual 2042 Single Subject credential program.

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 524 and 963; admission to single subject bilingual 2042 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 523 and admission to Bilingual 2042 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.

## ***Policy Studies in Language and Cross-Cultural Education***

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### **PLC 961. Student Teaching for Bilingual Elementary Students (1-12) Cr/NC**

Prerequisites: Admission to Bilingual 2042 Multiple Subject credential program. Student must provide own transportation to student teaching site.

Field experience at two grade levels in a multicultural setting and a bilingual elementary classroom; student teacher assumes responsibility for planning and instruction for specified time to comply with State requirements. Maximum credit 12 units.

### **PLC 962. Student Teaching for Elementary Bilingual Students II (1-12) Cr/NC**

Prerequisite: Policy Studies in Language and Cross-Cultural Education 961.

Field experience in a multicultural setting or a bilingual elementary classroom. Maximum credit 12 units.

### **PLC 963. Student Teaching for Bilingual Secondary Students I (3-4) Cr/NC**

Prerequisites: Policy Studies in Language and Cross-Cultural Education 400; concurrent registration in Policy Studies in Language and Cross-Cultural Education 524 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, 524, and 954.

### **PLC 964. Student Teaching for Bilingual Secondary Students II (9-12) Cr/NC**

Prerequisites: Policy Studies in Language and Cross-Cultural Education 524 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 non-bilingual classes to implement teacher competencies as developed in the total professional sequence. Maximum credit 12 units.

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# Special Education

In the College of Education

**OFFICE: North Education 70**  
**TELEPHONE: 619-594-6665**  
**<http://edweb.sdsu.edu/SPED/>**

## Faculty

Anne W. Graves, Ph.D., Professor of Special Education,  
Chair of Department  
Laura J. Hall, Ph.D., Professor of Special Education  
José Luis Alvarado, Ph.D., Associate Professor of Special Education  
and Associate Dean in the College of Education  
(Graduate Adviser)  
John R. Johnson, Ph.D., Associate Professor of Special Education  
Bonnie R. Kraemer, Ph.D., Associate Professor of Special Education  
Angela S. McIntosh, 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  
Yasemin Turan Qian, Ph.D., Assistant Professor of Special Education

## Courses Acceptable on Master's Degree Programs in Education (SPED)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### 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.

Prerequisite: Concurrent registration in Special Education 501.

Observation and participation in general and special education classrooms and related school activities for students with disabilities.

#### **SPED 505. Educational Services for Students with Serious Emotional Disturbance (1)**

Prerequisite: Admission to credential program.

Educational needs and services for students with serious emotional disturbance. Classroom interventions and procedures.

#### **SPED 510. Adapting Communication Systems for Students with Severe Disabilities (1)**

Prerequisite: 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)**

Prerequisite: Special Education 500.

Historical and philosophical perspectives of programs related to students with mild/moderate disabilities. Research on educational programs, curricular approaches, and characteristics.

#### **SPED 525. Characteristics of Students with Moderate/Severe Disabilities (3)**

Prerequisite: Special Education 500.

Historical and philosophical perspectives of programs related to students with moderate/severe disabilities. Research on educational programs, curricular approaches, and characteristics with emphasis on services in context of school reform.

#### **SPED 526. Characteristics and Education of Students with Physical, Health, and Sensory Impairments (3)**

Prerequisite: Special Education 500.

Historical and philosophical perspectives, characteristics, needs, and supports for individuals with physical, health, and sensory impairments in educational, home, and community settings. Implications of health concerns for programming.

#### **SPED 527. Special Education in a Pluralistic Society (3)**

Prerequisite: Credit or concurrent registration in Special Education 500.

Historical and philosophical perspectives of cultural pluralism in special education and programs related to diverse students with disabilities. Research on curricular approaches and instructional needs. Sociocultural aspects related to disability, race, ethnicity, gender, and language.

#### **SPED 528. Young Children with Disabilities and Their Families (3)**

Prerequisite: Special Education 500.

Characteristics, needs, and educational programs and services for infants, toddlers, and preschoolers with disabilities and their families. Legislative requirements, models of service delivery, recommended practices, and family diversity.

#### **SPED 530. Issues in Autism (3)**

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)**

Prerequisite: Admission to credential program.

Classroom assessment in general and special education for students with mild/moderate disabilities. Curriculum-based data collection strategies. Influences of cultural and linguistic diversity, and implications for curricular and instructional adaptations.

#### **SPED 553. Behavioral Strategies and Supports for Students with Disabilities (3)**

Prerequisites: Special Education 500 and 501.

Positive behavioral supports for students with disabilities in general and special education settings. Current theories and programs in functional assessment and behavioral change. Applications in educational and community environments with diverse students.

#### **SPED 560. Applications of Technology for Individuals with Disabilities (3)**

Prerequisite: Special Education 500.

Educational applications of current technologies for learners with disabilities. Selection, modification, and classroom use of technologies to improve or bypass physical, sensory, communicative, learning, and social limitations.

### **SPED 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)**

Prerequisite: Preliminary multiple or single subject 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 California Clear Teaching Credential.

### **SPED 605. Advanced Behavioral and Health Supports (1)**

Prerequisite: Admission to Level II credential or M.A. program in special education or related area.

Advanced approaches to dealing with behavioral crises and health issues in classroom, to include working with mental health specialists and school nurses.

### **SPED 634. Assessment: Students with Mild/Moderate Disabilities (2)**

Prerequisites: Special Education 524 and 534.

Assessment for instructional decision making including alternative data collection strategies, models for analysis and synthesis of assessment information, influences of cultural and linguistic diversity, and implications for instruction.

### **SPED 635. Assessment: Early Childhood Special Education and Moderate/Severe Disabilities (3)**

Prerequisite: Admission to credential program.

Models of assessment emphasizing observation and interviewing, performance-based approaches, transdisciplinary teaming, family-professional collaboration, and adaptations for specific disabilities, cultural, and linguistic diversity. Communicating and using assessment data for individualized program planning.

### **SPED 643. Educational Programs and Services for Young Children with Disabilities (3)**

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)**

Prerequisite: Special Education 525.

Design and implementation issues of instructional programs for students with severe handicaps; approaches which foster school and community integration and active family involvement will be analyzed.

### **SPED 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)**

Prerequisite: Admission to Level II credential or M.A. program in special education or related area.

Implementation of laws, regulations, and compliance requirements in special education. Leadership approaches for managing school related services within a multidisciplinary context.

### **SPED 653. Advanced Instruction, Collaboration, and Consultation in Special Education (2)**

Prerequisite: 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)**

Prerequisite: Admission to Level II credential or M.A. program.

Designing and adapting curriculum to promote generalization of skills of individuals with moderate/severe disabilities for involvement across settings with a focus on community activities and organizations.

### **SPED 655. Leadership and Management in Early Childhood Special Education (3)**

Prerequisite: Admission to Level II credential or M.A. program.

Program development and leadership in early childhood education with emphasis on recommended practices, legal and legislative issues, staff and parent development, funding, policy, and program evaluation.

### **SPED 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 (3)**

Facilitating transition for individuals with disabilities across activities, instructors, and settings including transition to employment. Instructional planning, assessment, and transition from school to work including postsecondary education.

### **SPED 662. Collaboration, Legislation, and Educational Planning in Special Education (3)**

Prerequisites: Admission to credential program and credit or concurrent registration in Special Education 980.

Collaboration, legislation, and individualized special education program planning skills for working with school personnel, parents, and community resources. Listening and questioning techniques, interpersonal processes, family systems, conflict resolution, decision-making, team functions, goals, objectives, outcomes, legal and ethical issues.

**SPED 676. Advanced Applied Behavior Analysis (3)**

Prerequisite: 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)**

Prerequisite: Special Education 524 or 525 or 528.

Educational theories, philosophies, research findings, issues and trends in area of exceptionality. Application of research to solution of educational problems. May be taken in each area of exceptionality:

- A. Mild/Moderate Disabilities
- B. Moderate/Severe Disabilities and Early Childhood

**SPED 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)**

Prerequisite: Twelve units in special education.

Intensive study in specific areas of special education. May be repeated with new content. See *Class Schedule* for specific content. 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**

Prerequisite: Permission of graduate adviser. Application to be made during previous semester.

Extensive daily participation or teaching in public schools and preparation for teaching of exceptional individuals. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**SPED 798. Special Study (1-6) Cr/NC/RP**

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.

**CREDENTIAL COURSES**

**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 975. Professional Development Planning in Special Education (1) Cr/NC**

Prerequisite: Completion of Level I credential in special education. Planning for professional development including demonstration of implementation of policies and practices appropriate for providing services to students with disabilities.

**SPED 980. Advanced Practicum in Special Education (1-12) Cr/NC**

Prerequisite: Consent of credential adviser.

Culminating practicum for Education Specialist Credential (Level 1). Participation supervised by a special educator. May be repeated in other specialties.

- A. Mild/Moderate Disabilities
- B. Moderate/Severe Disabilities
- D. ECSE: Infant/Preschool

**SPED 985. Professional Development: Reflections on Practice (1) Cr/NC**

Prerequisite: Completion or concurrent registration in Level II coursework.

Review of Level II: Professional Clear Induction Plans (PCIP); engage in reflective practice including goal setting; prepare portfolio with entries representing Level II courses and experiences.

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# Teacher Education

In the College of Education

**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

Ronald W. Evans, Ed.D., Professor of Teacher Education

Douglas Fisher, Ph.D., Professor of Teacher Education

Nancy E. Frey, 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

Cheryl L. Mason, Ph.D., Professor of Teacher Education

Carla S. Mathison, 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, Emerita

David. W. Strom, Ed.D., Professor of Teacher Education, Emeritus

Christianna Alger, Ph.D., Associate 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

Sharan A. Gibson, 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

Cathy Zozakiewicz, Ph.D., Associate Professor of Teacher Education

Meredith E. Houle, Ph.D., Assistant Professor of Teacher Education

Jessica Pierson, Ph.D., Assistant Professor of Teacher Education

## Courses Acceptable on Master's Degree Programs in Education (TE)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### UPPER DIVISION COURSES

#### TE 511. Assessment in Mathematics Education (3)

Techniques to assess and develop students' mathematical understanding. For use by elementary and secondary classroom teachers and mathematics education specialists.

#### TE 526. Teaching the Special Child in the Regular Classroom (3)

Prerequisite: 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, 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)

Prerequisite: Consent of instructor.

Advanced study of the research in curriculum development, construction and evaluation.

#### TE 601. Schools and the Pedagogy of Health Education (3)

Prerequisite: Preliminary multiple or single subject teaching credential.

Relationship between health and learning, and how to access community resources that support student health. Applicable to Teacher Induction Certificate Program. Not acceptable on a master's degree. (Formerly numbered Education 601.)

#### TE 602A. Seminar: California Clear Teaching Credential (1) Cr/NC

Prerequisite: 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 California Clear Teaching Credential.

#### TE 602B. Seminar: Formative Assessment (3)

Prerequisites: Preliminary multiple or single subject credential and Teacher Education 602A.

Role of advanced study in induction coursework on professional development. Summative assessment, applying the Plan, Instruct, Assess, Reflect, and Apply (PIARA) assessment system. Future professional development needs and plans outlined. Applicable to the California Clear Teaching Credential.

#### TE 604. Advanced Problems in Instruction (3)

Prerequisites: Teaching experience and consent of instructor.

Scientific research and philosophical principles which underlie school instruction.

#### TE 605. Innovations in Instruction (1-3)

Prerequisite: Teaching experience.

Exploration of innovative instructional practice in the public and private schools, with emphasis on innovative teaching strategies. An evaluation of the motivational effect and structural validity of promising instructional practices. See *Class Schedule* for specific content. Maximum credit three units applicable to a master's degree.

#### TE 607. Seminar in Research in Curricular Problems (1-3)

Prerequisites: Consent of the Director of the School of Teacher Education and instructor.

Individual study by graduate students who have demonstrated exceptional ability. Maximum credit three units applicable to a master's degree.

#### TE 610A. Seminar in Mathematics Education - Elementary School (3)

Prerequisite: Consent of instructor.

Factors affecting the elementary school mathematics curriculum; recent trends and current research in the teaching of elementary school mathematics.



**TE 610C. Seminar in Science in Elementary Education (3)**

Prerequisite: Consent of instructor.

Advanced study of the problems of teaching science in the elementary school with emphasis on the literature of science education.

**TE 626. Advanced Educational Psychology (3)**

Prerequisite: Teacher Education 923 or valid teaching credential.

Advanced study of the research in educational psychology and its application to learning and human growth.

**TE 630. Seminar in Literacy and Language Arts (3)**

Prerequisite: 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 (3)**

Prerequisite: Teacher Education 736.

Planning, presenting, and evaluating professional development activities in literacy education for teachers at the K-12 level.

**TE 634. Seminar in Research Investigations in Reading and Language Arts (4)**

Prerequisite: Consent of instructor.

Emphasis on interpreting, evaluating, conducting, and implementing findings of research and evaluation in reading and language arts.

**TE 635. Assessment of Reading and Language Arts (3)**

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: Credit or concurrent registration in 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)**

Prerequisite: California Teaching Credential.

A variety of instructional sequences (mini-courses), each focusing on a single topic or competency dealing with reading instruction. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

**TE 639. Literacy and Language (3)**

Prerequisite: Teacher Education 930 or 933.

Theories of literacy and methods for developing literacy in language, reading and writing. Instructional methods and assessment techniques for children and adults.

**TE 640. Planning for Teaching and Assessment in Writing (3)**

Prerequisite: Teaching experience.

Comprehensive writing instruction in context of the interactive language arts. Development of plans for curriculum and instruction in diverse classrooms. Examination of multiple assessments and how they inform instruction in K-12 classrooms.

**TE 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)**

Prerequisite: Valid teaching credential.

Examination of the process of change in education, analysis of recent major changes and study of techniques for effecting change.

**TE 654. Issues in Social Studies Education (3)**

Prerequisite: Graduate standing.

Issues of theory, research, and practice in social studies including dilemmas of social studies definition and practice; theory and research in teaching history and social sciences; teachers, texts, and classroom discourse; technology; recent reform efforts; classroom applications.

**TE 655. Sociocultural Foundations of American Education (2 or 3)**

Prerequisite: Admission to teacher education.

Historical and philosophical nature of American schools as it relates to equity, pedagogy, and curriculum. Issues of equity, race, culture, gender, ethnicity, sexual preference, and social issues as they impact the classroom.

**TE 656. Struggle for American Curriculum (3)**

Prerequisite: Graduate standing.

History and current status of American education with focus on curriculum. Emphasis on issues, controversies, and alternative philosophies.

**TE 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.

## Teacher Education

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### **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)**

Prerequisite: 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 (3)**

Prerequisites: Teacher Education 637 and 18 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)**

Prerequisite: Advancement to candidacy.

Intensive consideration of selected topics of current importance in teacher education. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree. **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**

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

Individual study. May involve fieldwork. Maximum credit six units applicable to a master's degree.

## CREENTIAL COURSES

### **TE 902. Classroom Management Skills (1-2)**

Prerequisite: Provisional or complete admission to multiple subject credential program.

Skills in interpreting the legal aspects of education, identifying various kinds of school and classroom organization, and using instructional media and verbal stimuli to facilitate learning.

### **TE 903. Secondary School Student Teaching Seminar (1-2) 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 four units.

### **TE 910A. Teaching Mathematics in the Elementary School (1-3)**

Prerequisite: Admission to multiple subject credential program, education specialist credential program, or possession of a teaching credential.

Instructional methods for development of children's conceptual understanding, computational, and problem-solving skills in mathematics, including use and development of materials and programs.

### **TE 910B. Teaching Social Studies in the Elementary School (1-3)**

Prerequisite: Admission to multiple subject credential program or possession of a teaching credential.

Developing curriculum, principles and materials of instruction, including instructional media and participation in elementary social studies education.

### **TE 910C. Teaching Science in the Elementary School (1-3)**

Prerequisite: Admission to multiple subject credential program or possession of a teaching credential.

Developing research-based science curriculum, principles and materials of instruction, including instructional media and participation in elementary science education.

### **TE 914. Teaching and Learning in the Content Area: Major (3)**

Prerequisite: Admission to teacher education credential program.

Teaching strategies in content specific fields of study taken concurrently with student teaching. May be repeated with new content. See *Class Schedule* for specific content.

### **TE 922. Behavioral and Psychological Aspects of Teaching (1-4)**

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)**

Prerequisite: Admission to multiple subject credential program, education specialist credential program, or possession of a teaching credential.

Selecting, designing, and evaluating appropriate learning experiences to assure children's growth in reading and language arts. Includes nature of reading and language arts as a human behavior, various approaches, materials, and techniques used in teaching reading and language arts. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units.

**TE 933. Teaching of Reading in the Secondary School (3)**

Teacher competencies as they relate to the teaching of reading/writing and diagnosing needs in the content areas. For students completing a credential at SDSU, this course must be taken concurrently with enrollment in first or second semester single subject credential program.

**TE 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.

**Electrical and Computer Engineering**

Refer to "Engineering" in this section of the bulletin.

# 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. degrees in engineering sciences (bioengineering; electrical and computer engineering; mechanical and aerospace engineering; structural engineering) and Master of Science degrees in bioengineering, aerospace, civil, electrical, and mechanical engineering. The Ph.D. degree programs are 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. The graduate degree may also prepare students for a teaching career.

## 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) English language 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 Four 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 Four 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) (SIMS Code: 441001)

**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:

- 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.
- 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

**(Major Code: 09021) (SIMS Code: 441003)**

- A E 601 Computational Fluid Mechanics (3)  
 A E 612 Compressible Fluid Flow (3)  
 A E 620 Incompressible Aerodynamics (3)  
 A E 644 Turbulent Flow (3)

##### 2. Structural Mechanics

**(Major Code: 09021) (SIMS Code: 441070)**

- E M 600 Seminar (1-3)  
 E M 611 Vibration of Elastic Solids (3)  
 E M 621 Theory of Elasticity (3)  
 E M 641 Structural Optimization (3)  
 E M 727 Theory of Elastic Stability (3)

#### Bioengineering

**(Major Code: 09051) (SIMS Code: 446001)**

**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

- Personal statement of graduate program goals;
- 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 (M E 797/E E 797), Thesis (M E 799A/E E 799A), or Special Study (M E 798/E E 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

**(Major Code: 09051) (SIMS Code: 446002)**

- BIOL 590 Physiology of Human Systems (4)  
 M E 580 Biomechanics (3)  
 M E 610 Finite Element Methods in Mechanical Engineering (3)  
 M E 681 Biomaterials (3)  
 M E 685/ EE 685 Micro-Electro-Mechanical Systems (MEMS) Design and Applications (3)

##### Biomaterials

**(Major Code: 09051) (SIMS Code: 446003)**

- BIOL 585 Cell and Molecular Immunology (3)  
 M E 540 Nonmetallic Materials (3)  
 M E 681 Biomaterials (3)  
 M E 685/ EE 685 Micro-Electro-Mechanical Systems (MEMS) Design and Applications (3)

##### Bioinstrumentation

**(Major Code: 09051) (SIMS Code: 446004)**

- BIOL 590 Physiology of Human Systems (4)  
 E E 503 Biomedical Instrumentation (3)  
 M E 685/ EE 685 Micro-Electro-Mechanical Systems (MEMS) Design and Applications (3)  
 M E 580 Biomechanics (3)

#### Electives:

- A E 601 Computational Fluid Dynamics (3)  
 BIOL 585 Cellular 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)  
 E E 502 Electronic Devices for Rehabilitation (3)  
 E E 503 Biomedical Instrumentation (3)  
 E M 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)  
 M E 502 Continuum Mechanics (3)  
 M E 540 Nonmetallic Materials (3)  
 M E 580 Biomechanics (3)  
 M E 585 Fundamentals of Micro-Electro-Mechanical Systems (MEMS) (3)  
 M E 610 Finite Element Methods in Mechanical Engineering (3)  
 M E 645 Mechanical Behavior of Engineering Materials (3)  
 M E 656 Conduction Heat and Transfer (3)  
 M E 681 Biomaterials (3)  
 M E 683 Design of Medical Devices (3)  
 PHYS 670A Medical Physics I (3)  
 PHYS 670B Medical Physics II (3)

### **Bioengineering BS/MS 4 + 1 Degree Program (Major Code: 09051) (SIMS Code: 446005)**

The BS/MS 4 + 1 degree program is for SDSU mechanical engineering students who wish to specialize in bioengineering prior to employment in industry, government, or as preparation for further training. Students must complete 160 units to be simultaneously awarded the B.S. degree in mechanical engineering and the M.S. degree in bioengineering. Students can apply for admission to the BS/MS 4 + 1 degree program when they have successfully completed a minimum of 90 units or a maximum of 115 units. These units must count towards one or the other of the two SDSU degree programs (BS or MS) that will ultimately be awarded in the dual degree program. All students must have a satisfactory score (minimum of 950 for combined verbal and quantitative) on the Graduate Record Examination (GRE) General Test and a minimum overall GPA of 3.0.

To satisfy the requirements for the BS/MS 4 + 1 degree program, students must achieve at least a 3.0 average in the 30 units of courses used to satisfy the graduate program of study. Of the 30 units, a maximum of nine units may be in 500-numbered mechanical engineering electives and all other program requirements must be satisfied. For the BS/MS 4 + 1 degree program, students must take M E 502, 580, and 585 for the biomechanics specialization; M E 502 or 580, 540 or 543, and 585 for the biomaterials specialization. The bioinstrumentation specialization is not open to students in the BS/MS 4 + 1 degree program. Upon successful completion of the BS/MS 4 + 1 degree program, students will receive the B.S. degree in mechanical engineering and M.S. degree in bioengineering.

### **Civil Engineering (Major Code: 09081) (SIMS Code: 442001)**

**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. Selected students in the program may be offered graduate teaching associateships. Experience as a graduate teaching associate can help prepare students for part-time or full-time teaching careers.

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  
(Major Code: 09081) (SIMS Code: 442030)**
  - 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  
(Major Code: 09081) (SIMS Code: 442025)**
  - 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  
(Major Code: 09081) (SIMS Code: 442075)**
  - 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  
(Major Code: 09081) (SIMS Code: 442085)**
  - 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  
(Major Code: 09081) (SIMS Code: 442096)**
  - CIV E 631 Spatial Hydrology (3)
  - CIV E 632 Computational Hydraulics and Hydrology (3)
  - CIV E 633 Environmental Hydrology (3)
  - CIV E 634 Surface Water Hydrology (3)
  - CIV E 635 Small Catchment Erosion (3)
  - CIV E 638 Sedimentation and River Engineering (3)

#### **Concentration in Environmental Engineering (Major Code: 09221) (SIMS Code: 442005)**

**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 of 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 556 Air Pollution Engineering (3)
- ENV E 558 Solid and Hazardous Waste Engineering (3)

ENV E 637	Process Design for Industrial 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 631	Spatial Hydrology (3)
CIV E 632	Computational Hydraulics and Hydrology (3)
CIV E 633	Environmental Hydrology (3)
CIV E 634	Surface Water Hydrology (3)
CIV E 635	Small Catchment Erosion (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) (SIMS Code: 443001)

**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 the graduate adviser 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 601 or 602.
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 Systems, VLSI and Digital Systems, Electromagnetic Systems, Computer Networks, Digital Signal Processing, Power and Control, Software Engineering, Rehabilitation Electronics. 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 601 or 602, 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 approved by the graduate adviser. 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 601 or 602, 12 units of breadth courses, and 15 units of 500-, 600-, or 700-level courses approved by the graduate adviser in the selected area of specialization. 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 Areas:** Courses are available in the following discipline areas.

- Communication Systems;
- VLSI and Digital Systems;
- Electromagnetic Systems;
- Computer Networks;
- Digital Signal Processing;
- Power and Control;
- Software Engineering;
- Rehabilitation Electronics.

Students can choose to specialize in one of these areas. For the availability of the specializations, courses, research areas, and other information related to the graduate program, refer to the Web site at <http://electrical.sdsu.edu>.

### Mechanical Engineering (Major Code: 09101) (SIMS Code: 447001)

**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. Asfaw Beyene, 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 coursework:
  - a. Twelve units in one area of specialization (designated as Group A,B,C, or D), with no more than six units of 500-level courses.
  - b. Nine additional units of 500-, 600-, or 700-level courses (excluding M E 797, 798, 799A, 799B, 799C) selected in consultation with the graduate adviser.
  - c. At least 15 units of coursework (excluding M E 797, 798, 799A, 799B, 799C) from mechanical engineering.
2. Nine additional units:
  - a. Thesis students: Six units of M E 797 and three units of 799A or 799B (thesis).
  - b. Non-thesis students: Three units of M E 797 and six units of 500-, 600-, or 700-level courses from mechanical engineering.
3. The total number of units from 500-level courses should not exceed nine.

#### Group A: Design and Manufacturing

M E 502	Continuum Mechanics (3)
M E 514	Advanced Machine Design (3)
M E 543	Powder-Based Manufacturing (3)
M E 555	Thermal Systems Analysis and Design (3)

M E 580	Biomechanics (3)
M E 585	Fundamentals of Micro-Electro-Mechanical Systems (MEMS) (3)
M E 596	Advanced Mechanical Engineering Topics (related to Design and Manufacturing) (3)
M E 610	Finite Element Methods in Mechanical Engineering (3)
M E 621	Mechanical Vibrations (3)
M E 645	Mechanical Behavior of Engineering Materials (3)
M E 646	Mechanics of Sintering (3)
M E 683	Design of Medical Devices (3)
M E 685/EE 685	Micro-Electro-Mechanical Systems (MEMS) Design and Applications (3)
M E 696	Advanced Topics in Mechanical Engineering (related to Design and Manufacturing) (3)
E M 621	Theory of Elasticity (3)
E M 641	Structural Optimization (3)
<b>Group B: Dynamics and Control</b>	
M E 520	Introduction to Mechanical Vibrations (3)
M E 530	Automatic Control Systems (3)
M E 596	Advanced Mechanical Engineering Topics (related to Dynamics and Control) (3)
M E 621	Mechanical Vibrations (3)
M E 632	Advanced Topics in Automatic Controls (3)
M E 696	Advanced Topics in Mechanical Engineering (related to Dynamics and Control) (3)
<b>Group C: Energy and Thermofluids</b>	
M E 555	Energy and Thermal Systems Analysis and Design (3)
M E 556	Solar Energy Conversion (3)
M E 596	Advanced Mechanical Engineering Topics (related to Energy and Thermofluids) (3)
M E 651	Advanced Thermodynamics (3)
M E 653	Combustion (3)
M E 656	Conduction Heat and Transfer (3)
M E 657	Convection Heat Transfer (3)
M E 658	Radiation Heat Transfer (3)
M E 661	Gas Dynamics (3)
M E 696	Advanced Topics in Mechanical Engineering (related to Energy and Thermofluids) (3)
A E 601	Computational Fluid Mechanics (3)
A E 612	Compressible Fluid Flow (3)
A E 644	Turbulent Flow (3)
<b>Group D: Materials and Mechanics</b>	
M E 502	Continuum Mechanics (3)
M E 520	Introduction to Mechanical Vibrations (3)
M E 540	Nonmetallic Materials (3)
M E 543	Powder-Based Manufacturing (3)
M E 580	Biomechanics (3)
M E 596	Advanced Mechanical Engineering Topics (related to Materials and Mechanics) (3)
M E 610	Finite Element Methods in Mechanical Engineering (3)
M E 621	Mechanical Vibrations (3)
M E 645	Mechanical Behavior of Engineering Materials (3)
M E 646	Mechanics of Sintering (3)
M E 681	Biomaterials (3)
M E 696	Advanced Topics in Mechanical Engineering (related to Materials and Mechanics) (3)
E M 621	Theory of Elasticity (3)
E M 641	Structural Optimization (3)

### Mechanical Engineering BS/MS 4 + 1 Degree Program (Major Code: 09101)

The BS/MS 4 + 1 degree program is for SDSU mechanical engineering students who wish to gain expertise in a specialization of mechanical engineering prior to employment in industry, government, or as preparation for further training. Students must complete 160 units to be simultaneously awarded the B.S. degree in mechanical engineering and the M.S. degree in mechanical engineering. Students can apply for admission to the BS/MS 4 + 1 degree program when they have successfully completed a minimum of 90 units or a maximum of 115 units. These units must count towards one or the other of the two SDSU degree programs (BS or MS) that will ultimately be awarded in the dual degree program. All students must have a satisfactory score (minimum of 950 for combined verbal and quantitative) on the Graduate Record Examination (GRE) General Test and a minimum overall GPA of 3.0.

To satisfy the requirements for the BS/MS 4 + 1 degree program, students must achieve at least a 3.0 average in the 30 units of courses used to satisfy the graduate program of study. Of the 30 units, a maximum of nine units may be in 500-level mechanical engineering electives and all other program requirements must be satisfied. The BS/MS 4 + 1 degree program allows students to use any three 500-level mechanical engineering courses toward their graduate degree. Students in the BS/MS 4 + 1 degree program must follow the thesis option. Upon successful completion of the BS/MS 4 + 1 degree program, students will receive the B.S. degree in mechanical engineering and M.S. degree in mechanical engineering.

### Master of Engineering Degree (Major Code: 09134) (SIMS Code: 444050)

#### 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. Morteza M. Mehrabadi, Professor and Chair, 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 Four 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 Programs

<http://www.engineering.sdsu.edu/main/jdp.htm>

## Engineering Sciences

### (Bioengineering)

(Major Code: 09051) (SIMS Code: 446006)

### (Electrical and Computer Engineering)

(Major Code: 09095) (SIMS Code: 443050)

### (Mechanical and Aerospace Engineering)

(Major Code: 19020) (SIMS Code: 444021)

### (Structural Engineering)

(Major Code: 09084) (SIMS Code: 442501)

The cooperating faculties of the College of Engineering at San Diego State University and the Jacobs School of Engineering at the University of California, San Diego offers joint doctoral programs in bioengineering, electrical and computer engineering, mechanical and aerospace engineering, and structural engineering. 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 joint Doctor of Philosophy degree allows research specialties in the following: bioengineering (molecular biomechanics and cell/tissue engineering with a focus in cell-matrix engineering); electrical and computer engineering (communication theory and systems; computer engineering; electronic circuits and systems; intelligence systems, robotics and control; photonics; and signal and image processing); mechanical and aerospace engineering (applied mechanics, materials science, materials processing, computational fluid mechanics, combustion, experimental fluid mechanics); structural engineering (finite element methods in structural analysis, soil mechanics).

## Program Administration

### San Diego State University:

Program Director: Eugene A. Olevsky

### University of California, San Diego:

Program Director: Enrique Luco

## 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 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 3.5 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, 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 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) English language 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  
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 director of the joint doctoral programs in engineering at UCSD and the director of the joint doctoral programs in engineering 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 director of the joint doctoral program 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 degrees in engineering sciences (bioengineering; electrical and computer engineering; mechanical and aerospace engineering; structural engineering) are research degrees and represent both attainment of advanced knowledge and demonstration of research skills. Therefore, no specific course requirements for the joint doctoral programs exist; however, the doctoral qualifying examination is based on a certain level of competence in the general areas of each degree. 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 director of the joint doctoral programs in engineering at UCSD and the director of the joint doctoral programs in engineering at SDSU. The examination will be oral 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 director of the joint doctoral programs in engineering at UCSD and the director of the joint doctoral programs in engineering 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 director of the joint doctoral programs in engineering at UCSD and the director of the joint doctoral program in engineering 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 respective UCSD department 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 degrees in engineering sciences/applied mechanics, bioengineering, electrical and computer engineering, and structural engineering 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 programs in engineering 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, Engineering Sciences/Applied Mechanics:

L. Demasi, G. Jacobs, J. Katz, N. Nosseir, M. Pierucci, A. Plotkin, S. Venkataraman (Aerospace Engineering and Engineering Mechanics). Z. Bayasi, 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, R. German, T. Impelluso, R. Kline, K. May-Newman, M. Mehrabadi, K. Moon, K. Morsi (Mechanical Engineering).

Committee Members, Bioengineering:

S. Kassegne, K. May-Newman.

Committee Members, Electrical and Computer Engineering:

M. Gupta, f. harris, S. Kumar, S. Nagaraj, M. Sarkar, S. Sharma.

Committee Members, Structural Engineering: L. Demasi, R. Dowell, G. Jacobs, J. Katz, A. Plotkin, J. Valdes, S. Venkataraman.

**University of California, San Diego:**

Program Director: Enrique Luco

Committee Members, Engineering Sciences/Applied Mechanics:  
R. Bitmead, J. Goddard, S. Krasheninnkov, P. Linden,  
X. Markenscoff, M. Meyers, C. Pozrikidis, J. Talbot, F. Williams  
(Mechanical and Aerospace Engineering).

Committee Members, Bioengineering:

J. Hasty, M. Heller, A. McCulloch, R. Sah, J. Watson.

Committee Members, Electrical and Computer Engineering:

P. Asbeck, P. Cosman, R. Cruz, T. Javidi, L. Larson, B. Rao,  
G. Rebeiz, C. Schurgers, P. Yu.

Committee Members, Structural Engineering:

S. Ashford, T. Hutchinson, J. Kosmatka, Q. Zhu.

**Section III.  
Other Programs**

**Rehabilitation Technology Certificate  
(Major Code: 15011) (SIMS Code: 444070)**

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.

**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.

**Courses Acceptable on Master's and  
Doctoral Degree Programs in Engineering  
(ENGR)**

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

**UPPER DIVISION COURSE**
**ENGR 510. Methods of Analysis (3)**

Prerequisite: Engineering 280 with minimum grade of C.

Selected topics from vector calculus, partial differential equations, and complex analysis, with engineering applications.

**GRADUATE COURSES**

**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.**

**ENGR 795. Internship/Practicum (1) Cr/NC**

Prerequisites: Twenty-seven units of graduate level coursework in the Master of Engineering program and consent of graduate adviser.

Supervised internship or practicum experience with approval of graduate adviser. Not applicable to an advanced degree. Maximum credit three units.

**ENGR 797. Research (1-3) Cr/NC/RP**

Prerequisite: 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.

## Engineering

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### **ENGR 799B. Project Extension (0) Cr/NC**

Prerequisite: 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**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree.

### **DOCTORAL COURSES**

### **ENGR 800. Seminar (1) Cr/NC**

Prerequisite: Admission to the doctoral program.

Doctoral students are expected to attend a weekly seminar dealing with current topics in different areas of applied mechanics. Course is to be taken every semester.

### **ENGR 810. Colloquium in Engineering Sciences (1) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Discussions on advances in research in engineering science/applied mechanics conducted by SDSU and UCSD faculty.

### **ENGR 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Independent research in general areas of applied mechanics. Content to be determined after consultation with adviser.

### **ENGR 898. Doctoral Special Study (1-3) Cr/NC/RP**

Prerequisite: Advancement to candidacy.

Individual study leading to study and research required for doctoral dissertation.

### **ENGR 899. Doctoral Dissertation (3-15) Cr/NC/RP**

Prerequisites: An officially constituted joint doctoral committee and successful completion of Senate Qualifying Examination.

Final research and preparation of dissertation for doctoral degree. Enrollment required during term in which dissertation is approved.

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# Aerospace Engineering and Engineering Mechanics

In the College of Engineering

**OFFICE: Engineering 308**

**TELEPHONE: 619-594-6074**

**E-MAIL: [ae@engineering.sdsu.edu](mailto:ae@engineering.sdsu.edu)**

## Faculty

Allen Plotkin, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics, Chair of Department

Joseph Katz, D.Sc., Professor of Aerospace Engineering and Engineering Mechanics

Balbir S. Narang, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics

Nagy Nosseir, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics

Gustaaf Jacobs, Ph.D., Associate Professor of Aerospace Engineering and Engineering Mechanics

Satchi Venkataraman, Ph.D., Associate Professor of Aerospace Engineering and Engineering Mechanics (Graduate Adviser)

Luciano Demasi, Ph.D., Assistant Professor of Aerospace Engineering and Engineering Mechanics

## Courses Acceptable on Master's Degree Programs in Aerospace Engineering and Engineering Mechanics (A E) (E M)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### UPPER DIVISION COURSES IN AEROSPACE ENGINEERING (A E)

#### **A E 520. Intermediate Aerospace Flight Mechanics (3)**

Prerequisite: Aerospace Engineering 320.

Rigid-body dynamics with applications in spacecraft attitude dynamics.

#### **A E 530. Rocket and Space Propulsion (3)**

Prerequisite: Aerospace Engineering 430.

Equilibrium combustion thermodynamics. Performance of rocket propelled vehicles. Rocket propulsion fundamentals. Topics in chemical (solid and liquid) and electrical propulsion systems.

#### **A E 540. Aircraft Stability and Control II (3)**

Prerequisite: Aerospace Engineering 440.

Dynamic stability and control of rigid aircraft; general equations of unsteady motion, stability derivatives, perturbed state thrust forces and moment, special problems in dynamic stability and response.

#### **A E 550. Viscous Flow (3)**

Prerequisites: Credit or concurrent registration in Engineering Mechanics 340, and Engineering 510.

Kinematics of fluid motion. Conservation of mass, momentum, and energy. Navier-Stokes equations; exact solutions. Boundary layer approximations, turbulent flow.

#### **A E 596. Advanced Aerospace Engineering Topics (3)**

Prerequisite: Consent of instructor.

Modern developments in aerospace engineering. 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.

### UPPER DIVISION COURSES IN ENGINEERING MECHANICS (E M)

#### **E M 510. Finite Element Methods in Aerospace Structures (3)**

Prerequisite: Aerospace Engineering 410.

Static and dynamic analysis of aerospace structures utilizing finite element methods.

#### **E M 530. Composite Structural Analysis (3)**

Prerequisites: Engineering 280 and Civil Engineering 301 (or Mechanical Engineering 304).

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)**

Prerequisite: 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 IN AEROSPACE ENGINEERING (A E)

#### **A E 601. Computational Fluid Mechanics (3)**

Prerequisites: Credit or concurrent registration in Aerospace Engineering 302 and Engineering 510.

Finite difference method of solving general fluid mechanics problems. Study of stability, convergence, compatibility, dissipation, and dispersion. A project is required.

#### **A E 612. Compressible Fluid Flow (3)**

Prerequisites: Aerospace Engineering 302 and credit or concurrent registration in Engineering 510.

Theory of flow at supersonic speeds. Linearized theory, three-dimensional wings in steady flight, slender-body theory, methods of characteristics.

#### **A E 620. Incompressible Aerodynamics (3)**

Prerequisites: Aerospace Engineering 301 and Engineering 510.

Theory of incompressible aerodynamics; airfoil and wing theory; computational methods.

#### **A E 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**

Prerequisite: Consent of graduate adviser.

Research in engineering. Maximum credit six units applicable to a master's degree.

#### **A E 798. Special Study (1-3) Cr/NC/RP**

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

Individual study. Maximum credit three units applicable to a master's degree.

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

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

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

### **A E 799B. Thesis or Project Extension (0) Cr/NC**

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

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

### **A E 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

### **GRADUATE COURSES IN ENGINEERING MECHANICS (E M)**

#### **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 (or Mechanical Engineering 304) 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 641. Structural Optimization (3)**

Prerequisites: Aerospace Engineering 310 and Engineering Mechanics 510.

Analytical and numerical methods for structural optimization. Optimization problem formulation; optimization using calculus of variations; linear programming; nonlinear optimization; global optimization; generalized optimality criteria and dual methods; sensitivity analysis; multilevel and decomposition techniques; shape and topology optimization.

#### **E M 696. Advanced Topics in Aerospace Structures (1-3)**

Advanced topics in aerospace structural mechanics and design to include non-linear elasticity, plasticity, analysis of plates and shells, fracture mechanics, thermal stress analysis, fatigue analysis, non-linear aeroelasticity, advanced optics in finite element methods, structural optimization and reliability analysis. 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.

#### **E M 727. Theory of Elastic Stability (3)**

Prerequisite: Engineering Mechanics 621.

Stability of elastic systems. Differential equations of stability by summation of forces and moments, and by the variational method. Applications.

#### **E M 731. Aeroelasticity (3)**

Prerequisites: Engineering Mechanics 611 and Aerospace Engineering 620.

Fluid-structure interaction and its static and dynamic effects on airplanes. Unsteady aerodynamics, static aeroelastic instability (divergence), aileron reversal, sweep effects, doublet lattice method, dynamic aeroelastic instability (flutter), computational dynamic aeroelasticity using NASTRAN.

#### **E M 797. Research (1-3) Cr/NC/RP**

Prerequisite: Consent of graduate adviser.

Research in engineering. Maximum credit six units applicable to a master's degree.

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# Civil, Construction, and Environmental Engineering

In the College of Engineering

**OFFICE: Engineering 424**

**TELEPHONE: 619-594-6071**

**E-MAIL: [ce@engineering.sdsu.edu](mailto:ce@engineering.sdsu.edu)**

## Faculty

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, Interim Chair of Department

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

Janusz C. Supernak, Ph.D., Professor of Civil, Construction, and Environmental Engineering

Bruce D. Westermo, Ph.D., Professor of Civil, Construction, and Environmental Engineering

R. Edward Beighley, II, Ph.D., Associate Professor of Civil, Construction, and Environmental Engineering

Fatih Buyuksonmez, Ph.D., P.E., Associate Professor of Civil, Construction, and Environmental Engineering

Julio R. Valdes, Ph.D., P.E., Associate Professor of Civil, Construction, and Environmental Engineering (Graduate Adviser)

Thais Alves, 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

Temesgen Garoma Ararso, Ph.D., P.E., Assistant Professor of Civil, Construction, and Environmental Engineering

Svetlana Kostic, Ph.D., P.E., Assistant Professor of Civil, Construction, and Environmental Engineering

## Adjunct Faculty

Kenneth G. Eggert, Ph.D., Civil, Construction, and Environmental Engineering

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.

## Courses Acceptable on Master's Degree Programs in Civil, Construction and Environmental Engineering

**(CIV E) (CON E) (ENV E)**

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

**NOTE: Proof of completion of prerequisites (copy of transcript) is required for all courses which list prerequisites.**

### Civil Engineering (CIV E) UPPER DIVISION COURSES

#### **CIV E 521. Structural Analysis II (3)**

Prerequisite: Civil Engineering 321.

Analysis of statically indeterminate structures by virtual work. Advanced treatment of slope deflection, moment distribution. Arch analysis, secondary stresses in trusses. Advanced treatment of influence lines. Introduction to matrix analysis of structures.

#### **CIV E 523. Design of Light Framed Structures (3)**

Prerequisite: Civil Engineering 321.

Material properties for wood and metal studs. Loads and structural forces for buildings. Design of beams, columns, bearing stud walls. Seismic forces and lateral force resisting systems. Roof, floor, and shear wall design. Composite beams. (Formerly numbered Civil Engineering 423.)

## Civil, Construction, and Environmental Engineering

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### **CIV E 525. Design of Steel Structures (3)**

Prerequisite: Civil Engineering 321.

Mechanical behavior of structural steel. Design of steel beams, girders, columns and members subjected to combined stresses. Design of various types of connections of steel structures; plate girders, continuous beams and rigid frames.

### **CIV E 528. Masonry Structures Design (3)**

Prerequisite: Civil Engineering 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)**

Two lectures and three hours of laboratory.

Prerequisite: Civil Engineering 444.

Principles of open channel flow. Analysis and problems of critical, uniform, gradually-varied, and rapidly-varied flows. Flow over weirs and spillways. Bridge, culvert and multiple openings hydraulics and modeling. Channel transitions. Design and environmental problems. Workshops on river analysis system (HEC-RAS 4.0).

### **CIV E 580. Traffic Engineering Design (3)**

Prerequisite: 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)**

Prerequisite: 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.

### **Environmental Engineering (ENV E) UPPER DIVISION COURSES**

### **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: Senior standing and 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: Senior standing and 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 563. Process and Instrumentation Laboratory (3)**

One lecture and six hours of laboratory.

Prerequisites: Environmental Engineering 363 and credit or concurrent registration in Environmental Engineering 554.

Design of experiment; run selected unit operations and processes of environmental engineering on bench-scale; use of high-end analytical instruments; collection, analysis and interpretation of data.

### **ENV E 596. Advanced Environmental Engineering Topics (1-3)**

Prerequisite: 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.

### **Civil Engineering (CIV E) GRADUATE COURSES**

### **CIV E 605. Prestressed Concrete Structures (3)**

Prerequisite: Civil Engineering 421 with minimum grade of C.

Fundamental concepts of prestressed concrete theory. Design applications to various types of structures.

### **CIV E 607. Dynamics of Structures (3)**

Prerequisite: Civil Engineering 521 with minimum grade of C.

Dynamic disturbances, structures with variable degelastic beams; continuous beams, rigid frames, floor systems. Energy methods in structural dynamics.

### **CIV E 608. Earthquake Engineering (3)**

Prerequisite: Civil Engineering 607.

Elements of seismology. Methods of analysis for earthquake loads. Procedures and code provisions for the design of earthquake-resistant structures.

### **CIV E 610. Finite Element Analysis of Structures (3)**

Prerequisite: 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.

Prerequisite: Civil Engineering 421.

Microstructure and cracking behavior of concrete. Theory and application of high strength and fiber reinforced concrete. Concrete durability additives and fiber reinforced plastic reinforcement for concrete. Innovative applications of advanced concrete materials. Includes a laboratory project.

### **CIV E 620. Traffic Flow and Control (3)**

Prerequisite: 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)**

Prerequisite: Civil Engineering 481 or Geography 559 or City Planning 625, with minimum grade of C.

Travel demand modeling with emphasis on application to growing metropolitan areas; four-step travel demand forecasting; disaggregate, behavioral, and activity-based approaches; recent methodological developments; transportation-land use interactions.

### **CIV E 622. Mass Transit Engineering (3)**

Prerequisite: 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 631. Spatial Hydrology (3)**

Prerequisite: Civil Engineering 444.

Integration of spatial data analysis and hydrologic modeling. Quantification of spatially distributed hydrologic characteristics. Decomposition of drainage network systems to support quasi-distributed hydrologic modeling. Quantification of hydrologic impacts due to model resolution, altered land use conditions, and modeling techniques.



**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)**

Prerequisite: Civil Engineering 445.

Hydrologic systems. Physical hydrology. Kinematic wave theory. Diffusion and dynamic wave theories. Watershed and stream channel routing. Hydrologic simulation.

**CIV E 635. Small Catchment Erosion (3)**

Prerequisite: Civil Engineering 444.

Integration of experimental and computational methods for estimating sediment discharge from small catchments. Design, implementation, and analysis of rainfall-runoff-erosion experiments. Simulation of construction site erosion and sediment export. Quantification of erosion control and sediment treatment potential for best management practices.

**CIV E 638. Sedimentation and River Engineering (3)**

Prerequisite: Civil Engineering 444 with minimum grade of C.

Hydraulics of sediment transport; erosion and sedimentation problems; river mechanics and morphology; mathematical modeling of river hydraulics; sediment transport and river channel changes. Design and environmental problems; erosion control and river training.

**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**

Prerequisite: Consent of graduate adviser.

Independent research in civil and environmental engineering. Maximum credit three units applicable to a master's degree.

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

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

Individual study. Maximum credit three units applicable to a master's degree.

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

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

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

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

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

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

**CIV E 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

**Construction Engineering (CON E)  
GRADUATE COURSES**

**CON E 650. Construction Labor Productivity (3)**

Prerequisites: Construction Engineering 301 and 401.

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.

## **Civil, Construction, and Environmental Engineering**

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### **Environmental Engineering (ENV E) 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)**

Prerequisite: Graduate standing.  
Chemistry of natural and polluted water. Process chemistry for water and wastewater treatment.

#### **ENV E 646. Microbiological Principles of Environmental Engineering (3)**

Prerequisite: 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**

Prerequisite: Consent of graduate adviser.  
Independent research in civil and environmental engineering. Maximum credit three units applicable to a master's degree.

#### **ENV E 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Consent of staff; to be arranged with department chair and instructor.  
Individual study. Maximum credit three units applicable to a master's degree.

#### **ENV E 799A. Thesis or Project (3) Cr/NC/RP**

Prerequisites: An officially appointed thesis committee and advancement to candidacy.  
Preparation of a project or thesis for the master's degree.

#### **ENV E 799B. Thesis or Project Extension (0) Cr/NC**

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.  
Registration required in any semester or term following assignment of RP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.

#### **ENV E 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.  
Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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# Electrical and Computer Engineering

In the College of Engineering

**OFFICE: Engineering 426**  
**TELEPHONE: 619-594-5718**  
**<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, The Radio Frequency Communications Systems Industry Chair  
fredric j. harris, Ph.D., P.E., 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  
Yusuf Ozturk, 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  
Santosh V. Nagaraj, Ph.D., Associate Professor of Electrical and Computer Engineering  
Sridhar Seshagiri, Ph.D., Associate Professor of Electrical and Computer Engineering  
Satish Kumar Sharma, Ph.D., Associate Professor of Electrical and Computer Engineering  
Ashkan Ashrafi, Ph.D., Assistant Professor of Electrical and Computer Engineering  
Mahasweta Sarkar, Ph.D., Assistant Professor of Electrical and Computer Engineering  
Arif Ege Engin, Ph.D., Assistant Professor of Electrical and Computer Engineering

## Adjunct Faculty

Khurram Waheed, Ph.D., Electrical and Computer Engineering

## The Radio Frequency Communications Systems Industry Chair

The Radio Frequency (RF) Communications Systems Industry Chair was established in recognition of the pervasiveness and vital role of radio frequency and wireless communications in modern society, and the emergence of San Diego as the world's leading center of research and development in the field of telecommunications and wireless engineering. The chair is sustained through generous contributions of Cubic Corporation and other corporations engaged in wireless communication technology, in appreciation of contributions of students trained in the field at SDSU. The RF Communications Systems Industry Chair is intended to promote excellence in education of RF and microwave engineers, and encourage significant professional activities in the field. Dr. Madhu S. Gupta, the first occupant of the chair, maintains a major involvement in professional work in the discipline and has received international recognition from his professional peers as a distinguished educator and scholar in the field of RF and microwave engineering.

## Courses Acceptable on Master's Degree Program in Electrical and Computer Engineering (E E) (COMPE)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### Electrical Engineering (E E) 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.

Prerequisite: Electrical Engineering 303 or 330.

Recent developments in electronic assistive devices and micro-computers for persons with various disabilities; assessment of disabled persons for suitable technological assistive devices.

#### E E 503. Biomedical Instrumentation (3)

Prerequisites: Engineering 280; Electrical Engineering 410 and 430 (or for Mechanical Engineering majors, Electrical Engineering 204 and Mechanical Engineering 330).

Instrumentation systems to monitor, image, control, and record physiological functions.

#### E E 522. Digital Control Systems (3)

Prerequisite: 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)

Prerequisite: Electrical Engineering 434.

Conduction theory of solids. Characteristics of tunnel, backward, breakdown, multilayer and varactor diodes; silicon controlled rectifiers and switches, unijunction transistors, hot electron devices. Lasers and laser applications.

#### E E 540. Microwave Devices and Systems (3)

Prerequisite: Electrical Engineering 440. 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.

## Electrical and Computer Engineering

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### **E E 541. Electro-Optics (3)**

Prerequisite: Electrical Engineering 434.

Optical/electronic devices and systems; wave beams; light-matter quantum interactions; incoherent and laser light sources; modulators and detectors. Applications in data transmission, measurement, and materials processing.

### **E E 546. Optical Fiber Communications Systems (3)**

Prerequisite: Electrical Engineering 434.

Optical fiber attenuation and dispersion, light-emitting diodes and laser diodes, PIN diodes and avalanche photodiodes, receiver designs, optical power budgets and rise time budgets, applications in digital and analog communication systems.

### **E E 556. Digital Signal Processing (3)**

Prerequisite: Electrical Engineering 410.

Discrete-time signals and systems, Sampling, Z-transform, Discrete-time Fourier transform and frequency responses, DFT, FFT, and introduction to IIR and FIR digital filter design.

### **E E 558. Digital Communications (3)**

Prerequisite: 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)**

Prerequisite: 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 581. Power System Dynamics (3)**

Prerequisite: Electrical Engineering 480.

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)**

Prerequisite: 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. Maximum combined credit of six units of Electrical Engineering 596 and 696 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.

### **Computer Engineering (COMPE) 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)**

Prerequisites: Computer Engineering 271 and Electrical Engineering 410.

Wide area and local area networks, multi-layered protocols, telephone systems, modems, and network applications.

### **COMPE 561. Windows Database and Web Programming (3)**

Prerequisite: Computer Engineering 361.

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)**

Prerequisite: Credit or concurrent registration in Computer Engineering 560.

Design and implementation of multimedia communication systems. Image compression, JPEG, VQ, cell-B standards. Video and audio compression standards, MPEG, MPEG-2, H.26X, G.72X. Data storage systems and multimedia requirements. Networking requirements and networks as multimedia carriers. Transport and network protocols for carrying multimedia over data networks. Multimedia system design, scheduling, congestion control, traffic shaping, buffer management.

### **COMPE 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)**

Prerequisite: 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.

### **Electrical Engineering (E E) 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)**

Prerequisite: Consent of instructor.

An intensive study in advance electrical engineering. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

### **E E 601. Linear System Theory and Design (3)**

Prerequisite: 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. (Formerly numbered Electrical Engineering 620.)

### **E E 602. Stochastic Signals and Systems (3)**

Prerequisite: Electrical Engineering 410.

Random signals, correlation functions, power spectral densities, the Gaussian process, narrow band processes. Applications to communication systems. (Formerly numbered Electrical Engineering 553.)

### **E E 625. Linear Optimal Control (3)**

Prerequisite: Electrical Engineering 601.

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, 602.

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)**

Prerequisite: 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 440, 558, 602.

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)**

Prerequisite: Electrical Engineering 541 or 546.

Advanced topics of interest in electro-optical communications, including lasers, background light sources, modulators, receivers, optical fiber and atmospheric channels, and adaptive techniques.

**E E 645. Antennas and Propagation (3)**

Prerequisite: 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 558 and 602.

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 558 and 602.

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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: Electrical Engineering 556.

Theory of two-dimensional signals and systems, image transforms, image enhancement, restoration and compression, image analysis and computer vision.

**E E 658. Advanced Digital Signal Processing (3)**

Prerequisites: Electrical Engineering 556 and 601.

Quantization noise. FIR and IIR filter design (bilinear transform, Parks-McClellan and least squares algorithms, rounding effects). Robust digital filter architectures. Sigma-delta modulation. Orthogonal decompositions and wavelet transform.

**E E 660. High Speed Networks: Design Principles and Recent Advances (3)**

Prerequisite: 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)**

Prerequisite: Computer Engineering 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)**

Prerequisite: 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)**

Prerequisite: 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 679. Real-Time Software Engineering (3)**

Prerequisite: Electrical Engineering 675.

Principles of real-time programming and software engineering for microprocessor systems. Concurrent programming and multitasking. Structured programming. Software validation. Team programming projects.

**E E 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 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.

## **Electrical and Computer Engineering**

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### **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**

Prerequisite: 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**

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

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

### **E E 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required for all students taking the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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# Mechanical Engineering

In the College of Engineering

**OFFICE: Engineering 326**

**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

Subrata Bhattacharjee, Ph.D., Professor of Mechanical Engineering

Randall German, Ph.D., Professor of Mechanical Engineering and  
Associate Dean of the College of Engineering

Thomas J. Impelluso, Ph.D., Professor of Mechanical Engineering

Ronald A. Kline, Ph.D., Professor of Mechanical Engineering

Karen D. May-Newman, Ph.D., Professor of Mechanical Engineering  
(Bioengineering Graduate Adviser)

Kee S. Moon, Ph.D., Professor of Mechanical Engineering

Khaled B. Morsi, Ph.D., Professor of Mechanical Engineering

Eugene A. Olevsky, Ph.D., Distinguished Professor of Mechanical  
Engineering and Director of Doctoral Programs in the  
College of Engineering

Asfaw Beyene, Ph.D., Associate Professor of Mechanical Engineering  
(Graduate Adviser)

Samuel K. Kassegne, Ph.D., Associate Professor of  
Mechanical Engineering

Fletcher J. Miller, Ph.D., Assistant Professor of Mechanical  
Engineering

## Adjunct Faculty

Bryan Cornwall, Ph.D., Mechanical Engineering

## Courses Acceptable on Master's Degree Programs in Mechanical Engineering (M E)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### 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 351, 490A, and 530 require evidence of concurrent registration in appropriate courses.**

#### M E 502. Continuum Mechanics (3)

Prerequisites: Mechanical Engineering 304 (or 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.

#### M E 520. Introduction to Mechanical Vibrations (3)

Prerequisites: Mechanical Engineering 304 (or Civil Engineering 301) and Mechanical Engineering 330.

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)

Prerequisite: Mechanical Engineering 330.

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 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 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.

#### M E 555. Energy and Thermal Systems Analysis and Design (3)

Prerequisites: Mechanical Engineering 351 and 452.

Analysis, design, and optimization of thermal systems using microcomputers. Modeling of thermal systems and components. Thermal system component characteristics and their effect on overall system performance. Relationship among thermal sciences in design process. Introduction to thermoeconomic optimization.

#### M E 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.

#### M E 580. Biomechanics (3)

Prerequisites: Mechanical Engineering 304 (or 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.

#### 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 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)

Prerequisite: 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 nine 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 621. Mechanical Vibrations (3)**

Prerequisites: Mechanical Engineering 520 and Engineering 510.

Topics in vibration relating to mechanical design such as nonlinear vibrations, distributed mass systems, random vibrations, mobility analysis, isolator design.

#### **M E 632. Advanced Topics in Automatic Controls (3)**

Prerequisite: Mechanical Engineering 530.

Analysis and synthesis of sample data systems. State space analysis of multivariable systems, optimal control systems.

#### **M E 645. Mechanical Behavior of Engineering Materials (3)**

Prerequisites: Mechanical Engineering 314, 340, and 350.

Elastic and plastic deformation of monolithic engineering materials and composites. Dislocation theory and plasticity of crystalline solids. Linear elastic and elastic-plastic fracture mechanics. Failure analysis of engineering components. Design optimization based on materials and service environment variables.

#### **M E 646. Mechanics of Sintering (3)**

Prerequisite: Mechanical Engineering 340.

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)**

Prerequisite: 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.

#### **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.

#### **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.

#### **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.

#### **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**

Prerequisite: Consent of graduate adviser; to be arranged with department chair and instructor.

Individual study or internship. Maximum credit three units applicable to a master's degree.

#### **M E 799A. Thesis or Project (3) Cr/NC/RP**

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

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

#### **M E 799B. Thesis or Project Extension (0) Cr/NC**

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

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

#### **M E 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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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

Joanna M. Brooks, Ph.D., Associate Professor of English and Comparative Literature, Chair of Department  
Sandra B. Alcosser, M.F.A., Professor of English, M.F.A. Program Director  
Alida L. Allison, 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  
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  
Lawrence F. McCaffery, Ph.D., Professor of English and Comparative Literature, Emeritus  
David Matlin, Ph.D., Professor of English  
William A. Nericcio, Ph.D., Professor of English and Comparative Literature  
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  
Clare Colquitt, Ph.D., Associate Professor of English  
June Cummins-Lewis, Ph.D., Associate Professor of English, Director of Graduate Studies, M.A. Program  
Ilya V. Kaminsky, J.D., Associate Professor of English and Comparative Literature, M.F.A. Program Director  
Barry G. Stampfl, Ph.D., Associate Professor of English  
Joseph T. Thomas, Jr., 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  
Phillip Serrato, Ph.D., Assistant Professor of English and Comparative Literature

## 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) English language 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 December 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 Four 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) (SIMS Code: 112101)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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 (portfolio assessment).

#### Specialization in American Literature (Major Code: 15011) (SIMS Code: 112103)

Core Course (3 units):

ENGL 600 Introduction to Graduate Study (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, 15 units selected from other English and comparative literature departmental graduate offerings. At least six units of these elective units must be taken outside of specialization and from other specializations within the English M.A. program. 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) – ENGL 799A (3 units)  
 Plan B: (Portfolio Assessment and Defense) – ENGL 790 or an additional three unit 700-level course in English with the approval of the graduate adviser.

**Specialization in British Literature  
 (Major Code: 15011) (SIMS Code: 112104)**

- Core Course (3 units):  
 ENGL 600 Introduction to Graduate Study (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, 15 units selected from other English and comparative literature departmental graduate offerings. At least six of these elective units must be taken outside of specialization and from other specializations within the English M.A. program. 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) – ENGL 799A (3 units)  
 Plan B: (Portfolio Assessment and Defense) – ENGL 790 or an additional three unit 700-level course in English with the approval of the graduate adviser.

**Specialization in Children's Literature  
 (Major Code: 15011) (SIMS Code: 112107)**

- Core Course (3 units):  
 ENGL 600 Introduction to Graduate Study (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, 15 units selected from other English and comparative literature departmental graduate offerings. At least six of these elective units must be taken outside of specialization and from other specializations within the English M.A. program. 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) – ENGL 799A (3 units)  
 Plan B: (Portfolio Assessment and Defense) – ENGL 790 or an additional three unit 700-level course in English with the approval of the graduate adviser.

**Specialization in Comparative Literature  
 (Major Code: 15011) (SIMS Code: 112115)**

- Core Course (3 units):  
 ENGL 600 Introduction to Graduate Study (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, 15 units selected from other English and comparative literature departmental graduate offerings. At least six of these elective units must be taken outside of specialization and from other specializations within the English M.A. program. 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) – ENGL 799A (3 units)  
 Plan B: (Portfolio Assessment and Defense) – ENGL 790 or an additional three unit 700-level course in English with the approval of the graduate adviser.

**Specialization in Rhetoric and Writing  
 (Major Code: 15011) (SIMS Code: 112160)**

- Core Course (3 units):  
 ENGL 600 Introduction to Graduate Study (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, 15 units selected from other English and comparative literature departmental graduate offerings. At least six of these elective units must be taken outside of specialization and from other specializations within the English M.A. program. 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) – ENGL 799A (3 units)  
 Plan B: (Portfolio Assessment and Defense) – ENGL 790 or an additional three unit 700-level course in English with the approval of the graduate adviser.

## 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 Four 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) (SIMS Code: 112121)

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

(Major Code: 90001) (SIMS Code: 112109)

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.

## Courses Acceptable on the Master's Degree Programs in Creative Writing and English (ENGL) (C LT)

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### English (ENGL) 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)

Prerequisites: Six lower division units in literature and/or creative writing.

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 lower division units in literature and/or creative writing.

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)

Prerequisites: Six lower division units in literature and/or creative writing.

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: Six lower division units in literature and/or creative writing. Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units; completed Writing Placement 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 lower division units in literature and/or creative writing.

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 lower division units in literature and/or creative writing.

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 and/or creative writing.

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)

Prerequisites: Six lower division units in literature and/or creative writing.

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)

Prerequisites: Six lower division units in literature and/or creative writing.

Representative works by United States writers from 1860 to 1920; likely to include works by Charles Chesnutt, Kate Chopin, Stephen Crane, Emily Dickinson, Henry James, Mark Twain, Edith Wharton, and others.

#### ENGL 524. Literature of the United States, 1920-1960 (3)

Prerequisites: Six lower division units in literature and/or creative writing.

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)

Prerequisites: Six lower division units in literature and/or creative writing.

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)

Prerequisites: Six lower division units in literature and/or creative writing.

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)

Prerequisites: Six lower division units in literature and/or creative writing.

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)

Prerequisites: Six lower division units in literature and/or creative writing.

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)

Prerequisites: Six lower division units in literature and/or creative writing.

Chaucer's works, with emphasis on *The Canterbury Tales* and *Troilus and Criseyde*.

#### ENGL 533. Shakespeare (3)

Prerequisites: Six lower division units in literature and/or creative writing.

An introduction to the writings of Shakespeare. This course cannot be used in place of English 302 to satisfy General Education requirements.

#### ENGL 534. Study of Shakespeare (3)

Prerequisite: English 533.

Advanced study of Shakespeare's achievement as poet and playwright. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units.

#### ENGL 536. British Literary Periods, Beginnings to 1660 (3)

Prerequisites: Six lower division units in literature and/or creative writing.

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)**

Prerequisites: Six lower division units in literature and/or creative writing.

Milton's writings, with emphasis on *Paradise Lost*.

**ENGL 540A-540B. English Fiction (3-3)**

Prerequisites: Six lower division units in literature and/or creative writing.

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)**

Prerequisites: Six lower division units in literature and/or creative writing.

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.

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.

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.

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)**

Prerequisites: Six lower division units in literature and/or creative writing.

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.

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: Three lower division units in literature and/or creative writing and 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: Three lower division units in literature and/or creative writing and 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: Three lower division units in literature and/or creative writing and 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: Three lower division units in literature and/or creative writing and 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: Six lower division units in literature and/or creative writing. 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: Three lower division units in literature and/or creative writing and 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: Six lower division units in literature and/or creative writing and English 570.

A creative writing workshop in poetry. Continuation of English 570. Maximum credit six units.

**ENGL 581W. Writing of Fiction (3)**

Prerequisites: Three lower division units in literature and/or creative writing and English 280. Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units; completed Writing Placement 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: Six lower division units in literature and/or creative writing and 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: Three lower division units in literature and/or creative writing and English 280. Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units; completed Writing Placement 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: Six lower division units in literature and/or creative writing. 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.

**Comparative Literature (C LT)  
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)**

Prerequisite: Six upper division units in literature or any of the other arts.

Comparative study of literature and other arts such as painting, sculpture, architecture, music, dance, and film. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to the M.F.A. degree in creative writing.

**C LT 595. Literature and Aesthetics (3)**

Prerequisite: Six upper division units in literature or any of the other arts.

Theoretical and experiential investigation of relationships between literature and the other arts; literary works in context of an inquiry into aesthetics. May be repeated with new title and content. See *Class Schedule* for specific content. Maximum credit six units.

**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.

**English (ENGL)  
GRADUATE COURSES**

**ENGL 600. Introduction to Graduate Study (3)**

Prerequisite: Twelve upper division units in English.  
Introduction to research methods and critical approaches common in the graduate study of literature and expository writing, with attention to basic reference works, bibliographical techniques, analytical strategies, scholarly frames of reference, and theory. Recommended for first-semester graduate students.

**ENGL 601. Literary Study in a Multicultural World (3)**

Prerequisite: Credit or concurrent registration in English 600.  
Relationship of literature to gender, race, class, and nationality. Changing conceptions of literary canons. Exploration, through literary texts, of values in literature and the constituents of literary value.

**ENGL 602. Literary Theory and Critical Practice (3)**

Prerequisite: Credit or concurrent registration in English 600.  
Major issues in the history of literary criticism as well as contemporary approaches. Study of criticism and theory accompanied by writing practicum. Students will write in several critical modes and build graduate level proficiency in analyzing literary issues.  
Prerequisite to 700-level seminars.

**ENGL 604. 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)**

Prerequisite: Credit or concurrent registration in English 600.  
Advanced study of a specific literary genre, such as the novel, tragic drama, lyric poetry, the personal essay, autobiography. May be repeated with new content. Maximum credit six units applicable to a master's degree.

- A. American Literature
- B. British Literature
- C. Comparative Literature
- D. Children's Literature

**ENGL 624. British Literature (3)**

Prerequisite: Twelve upper division units in English.  
Selected works of an author, period, or subject in English literature. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

**ENGL 625. Literature of the United States (3)**

Prerequisite: Twelve upper division units in English, with courses in American literature strongly recommended.

Selected works of an author, period, or subject in literature of the United States. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

**ENGL 626. Comparative Literature (3)**

Prerequisite: Twelve upper division units in English, comparative literature, or a foreign language literature.

Comparative approaches to literature: study of a theme, geographical region, external relationship, or of selected authors. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**ENGL 627. History of Children's Literature (3)**

Prerequisite: Twelve upper division units in English. Strongly recommended: Coursework in children's literature.

Roots and development of children's literature as a distinct field, from oral literature to contemporary explosions of publications.

**ENGL 630. Form and Theory of Poetry (3)**

Prerequisite: Twelve upper division units in English.  
Poetry as a literary form. May be repeated with new content. Maximum credit six units applicable to an M.F.A. degree in creative writing.

**ENGL 631. Form and Theory of Fiction (3)**

Prerequisite: Twelve upper division units in English.  
Fiction as a literary form. May be repeated with new content.  
Maximum credit six units applicable to an M.F.A. degree in creative writing.

**ENGL 696. Special Topics (3)**

Prerequisite: Twelve upper division units in English.  
Intensive study in specific areas of English. May be repeated with new content. See *Class Schedule* for specific content. Maximum 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)**

Prerequisite: Six units of approved 500- or 600-level courses.  
Issues and topics of special interest to children's literature, such as gender depictions, commodification, cross-over writing, and regionalism. Maximum credit six units applicable to a master's degree.

**ENGL 730. Seminar: Perspectives in Critical Analysis (3)**

Prerequisites: English 600 and 602.  
Advanced study of analytical perspectives such as contemporary literary theory, feminist poetics, canon and exclusion, literature and other arts, literature and other disciplines.

**ENGL 750F. M.F.A. Seminar: Fiction Writing (3)**

Prerequisite: Open only to students admitted to M.F.A. in creative writing.  
Advanced seminar in fiction writing. May include readings in contemporary fiction and narrative theory. Students in fiction focus must take course six times, generating new work each time with various instructors. Maximum credit 18 units applicable to a master's degree.

**ENGL 750P. M.F.A. Seminar: Poetry Writing (3)**

Prerequisite: Open only to students admitted to M.F.A. in creative writing.  
Advanced seminar in poetry writing. May include readings in contemporary poetry and theory. Students in poetry focus must take course six times, generating new work each time with various instructors. Maximum credit 18 units applicable to a master's degree.

**ENGL 784. Seminar: Creative Non-Fiction (3)**

Prerequisite: Six units of graduate level creative writing courses.  
Advanced approach to writing book reviews and short critical essays. Professional focuses necessary for these forms. Emphasis on writing, reading, research, and direct function of these processes.

**ENGL 790. Seminar: Portfolio/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.  
Preparation, with close faculty supervision, of scholarly essays for portfolio assessment and oral defense. Advanced study of critical approaches, development of sophisticated research methodology, and close attention to scholarly writing.

**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**

Prerequisite: Advancement to candidacy in the M.F.A. degree in creative writing.  
Independent work in general field of candidate's thesis project.

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

Prerequisite: Consent of staff; to be arranged with department chair and instructor.  
Individual study. Maximum credit six units applicable to a master's degree.

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

Prerequisites: An officially appointed thesis committee and advancement to candidacy.  
Preparation of a thesis for the master's degree.

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

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.  
Registration required in any semester or term following assignment of RP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

**ENGL 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.  
Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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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**

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

## Faculty

Fred W. Kolkhorst, Ph.D., Professor of Exercise and Nutritional Sciences, Director of School

Michael J. Buono, Ph.D., Professor of Exercise and Nutritional Sciences

Jeanne F. Nichols-Bernhard, Ph.D., Professor of Exercise and Nutritional Sciences

Larry S. Verity, Ph.D., Professor of Exercise and Nutritional Sciences (Graduate Adviser)

## Associateships and Assistantships

Graduate teaching associateships are available for a limited number of qualified students. These provide essential education, technical training, and creative experience necessary for future professional and scholarly activity or college-level teaching. Graduate assistantships are also available in some cases to aid faculty research. Application blanks and additional information on graduate programs may be obtained from the School of Exercise and Nutritional Sciences Web site at <http://ens.sdsu.edu>.

## 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) English language 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 Four 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) (SIMS Code: 666521)

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 Four 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 Four of this bulletin.

### Specific Requirements for the Master of Science in Nutritional Science and Master of Science in Exercise Physiology

(Major Code: 08356) (SIMS Code: 662990)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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.

## Courses Acceptable on Master's Degree Programs (ENS)

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### UPPER DIVISION COURSE Exercise and Nutritional Sciences Course

#### 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 Exercise and Nutritional Sciences Courses

#### ENS 601. Experimental Methods in Exercise and Nutritional Sciences (3)

Prerequisite: Undergraduate statistics course.  
Experimental methods in exercise and nutritional science.

#### ENS 602. Research Evaluation in Exercise and Nutritional Sciences (3)

Prerequisite: Exercise and Nutritional Sciences 601.  
Techniques in designing, conducting, and reporting research in exercise and nutritional science. Qualitative and quantitative paradigms examined. Ethical consideration of human research.

#### ENS 632. Physiological Chemistry of Exercise (3)

Prerequisite: Exercise and Nutritional Sciences 661.  
Biochemical and metabolic responses of the human body to acute and chronic exercise. Neuroendocrine control of fuel regulation during exercise.

#### ENS 659. Exercise Cardiology and Pathology (3)

Prerequisites: Exercise and Nutritional Sciences 304 and 304L.  
Interpretation of resting and exercise electrocardiograms with cardiopulmonary pathologies that skew interpretations.

#### ENS 661. Seminar in Advanced Physiology of Exercise (3)

Prerequisites: Exercise and Nutritional Sciences 303 and 304.  
Advanced aspects of the physiology of exercise. Effects of exercise on human beings in relation to health, longevity, morphology and performance.

#### ENS 662. Advanced Exercise Physiology Laboratory (3)

Nine hours of laboratory.  
Prerequisites: Exercise and Nutritional Sciences 304, 304L, and admission to program in Exercise Physiology.

Laboratory course designed to develop competency in respiratory metabolism pulmonary function, gas analysis, blood chemistry and ergometry. Experience in the application of exercise procedures with human subjects and analysis and interpretation of results.

#### ENS 666. Adult Fitness: Exercise Prescription (3)

Prerequisites: Exercise and Nutritional Sciences 304 and 304L.  
Physical conditioning programs for the prevention, rehabilitation, and control of diseases associated with aging adults. Topics include disease etiology, health/disease evaluation, and exercise prescription for apparently healthy and diseased adults.

#### ENS 668. Adult Fitness: Exercise Leadership and Administration (3)

One lecture and six hours of laboratory.  
Prerequisite: Exercise and Nutritional Sciences 666.  
Administration of and role of exercise programs in preventive medicine, corporate fitness, and Phase I, II, and III of cardiac rehabilitation, and other disease rehabilitation. Development of skills in exercise leadership in traditional and experimental exercise programs for the apparently healthy and diseased adult.

#### ENS 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 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/RP

Prerequisite: Consent of department chair.  
Individual study. Maximum credit six units applicable to a master's degree.

#### ENS 799A. Thesis or Project (3) Cr/NC/RP

Prerequisites: An officially appointed thesis committee and advancement to candidacy.  
Preparation of a project or thesis for the master's degree.

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

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.  
Registration required in any semester or term following assignment of RP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.

#### ENS 799C. Comprehensive Examination Extension (0) Cr/NC

Prerequisite: Completion or concurrent enrollment in degree program courses.  
Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

## Finance

Refer to "Business Administration" in this section of the bulletin.

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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](mailto:french.coord@mail.sdsu.edu)**  
**<http://www-rohan.sdsu.edu/~frenital/>**

## Faculty

Anne Donadey, Ph.D., Professor of French and Women's Studies,  
Chair of Department (Graduate Adviser)

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

## 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

Research areas of the graduate faculty cover all periods of French and Francophone literature and culture. In particular, the department includes specialists in fields such as Francophone literature and cultural studies, medieval and renaissance cultural studies, eighteenth century literature, theatre and film studies, Quebec, international business, and second language acquisition and technology. SDSU houses a federally-funded National Language Resource Center, which conducts research and dissemination projects in all areas of language and culture. Further, we have a state-of-the-art research library.

The graduate program in French offers opportunities for well-qualified M.A. candidates to complete up to nine units of their 30 unit official program on a study abroad program. Graduate students may participate in the CSU International Programs, ISEP, or the SDSU Paris Semester. An M.A. degree earned in the program can provide students with university-level teaching experience and access to community college level teaching positions. Students who earn an M.A. in French at SDSU may also continue on to a Ph.D. program or pursue a variety of careers in areas where knowledge of French language and culture are necessary.

## 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) English language 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 Four of this bulletin.

## Specific Requirements for the Master of Arts Degree

**(Major Code: 11021) (SIMS Code: 112701)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete a graduate program of at least 30 units which includes a major consisting of at least 24 units in French, of which at least 18 units must be in 600- and 700-numbered courses in French, including French 799A, Thesis, for those following Plan A.

Students, with the consent of the graduate adviser, may elect Plan A, which includes French 799A, Thesis (minimum GPA 3.6), or Plan B, which includes written and oral examinations in lieu of the thesis.

## Courses Acceptable on Master's Degree Program in French (FRENC)

**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)

Prerequisite: French 302.

Stylistic comparison of French and English through translation of a variety of prose styles from English to French and from French to English.

#### FRENC 520. French and Francophone Literary Studies (3)

Prerequisites: French 302 and 305A or 305B.

Specialized study of a century, genre, movement or theme in French and Francophone literature. May be repeated with new title and content. See *Class Schedule* for specific content. Maximum credit six units.

#### FRENC 530. French and Francophone Cultural Studies (3)

Prerequisites: French 302 and 421 or 422.

Specialized study of artistic and intellectual trends, customs, and politics in French and Francophone culture. May be repeated with new title and content. See *Class Schedule* for specific content. Maximum credit six units.

#### FRENC 596. Topics in French Studies (1-4)

Prerequisite: French 302.

Topics in French literature, culture, and linguistics. May be repeated with new content. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of nine units of 596. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### GRADUATE COURSES

#### FRENC 621. Critical Methods (3)

Prerequisite: Eighteen upper division units in French.

Methods and theories of critical analysis and their application to the works of a major French author or literary genre.

#### FRENC 631. Issues in French and Francophone Studies (3)

Prerequisite: Graduate standing.

Study of a theme, theoretical or literary movement, or historical moment. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

#### FRENC 696. Topics in French Studies (3)

Prerequisite: Eighteen upper division units in French.

Intensive study in specific areas of French. May be repeated with new content. See *Class Schedule* for specific content. 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)

Prerequisite: Eighteen upper division units in French.

In-depth study of works of a major French or Francophone author. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

#### FRENC 710. Seminar in a Literary Genre (3)

Prerequisite: Eighteen upper division units in French.

Study of a specific literary genre, e.g. poetry, novel, theater. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

#### FRENC 720. Seminar in French and Francophone Culture and Civilization (3)

Prerequisite: Eighteen upper division units in French.

Study of a specific topic in French and Francophone culture and civilization. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

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

Prerequisites: Advancement to candidacy and approval of graduate adviser.

Individual study. Maximum credit three units applicable to a master's degree.

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

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

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

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

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

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

#### FRENC 799C. Comprehensive Examination Extension (0) Cr/NC

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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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

Stuart C. Aitken, Ph.D., Professor of Geography,  
Chair of Department

Edward Aguado, Ph.D., Professor of Geography,  
Assistant Dean for Student Services, Policy and Curriculum in the  
Division of Graduate Affairs

George Christakos, Ph.D., Professor of Geography, The Stephen and  
Mary Birch Foundation Chair in Geographical Studies

Allen S. Hope, Ph.D., Professor of Geography,  
Master's Degree Programs Adviser

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 Adviser

John R. Weeks, Ph.D., Distinguished Professor of Geography

Li An, Ph.D., Associate Professor of Geography

Trent Biggs, Ph.D., Associate Professor of Geography

Fernando Bosco, Ph.D., Associate Professor of Geography

Pascale J. Marcellii, Ph.D., Associate Professor of Geography

André Skupin, Ph.D., Associate Professor of Geography

Ming-Hsiang Tsou, Ph.D., Associate Professor of Geography

Kathleen A. Farley, Ph.D., Assistant Professor of Geography

Katherine Elizabeth Swanson, 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. Our graduate teaching associateships program can prepare students for a teaching career.

## 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. These degrees provide the essential education, technical training, and creative experience necessary for professional activity or college-level teaching. Graduate programs are generally assigned around one of the following systematic areas:

### Group A – Systematic Areas

- Human Geography — Urban, Social, and Political Geography
- Environmental Geography — Society and Environment, Watershed/Ecosystems Analysis
- Physical Geography — Biogeography, Climatology, Hydrology, Landscape Ecology

### Group B – Spatial Analytical Methods and Techniques

- Spatial Quantitative and Qualitative Methods
- Cartography and Internet Mapping
- Geocomputation and Spatial Modeling
- Geographic Information Systems (GIS)
- Remote Sensing and Image Processing
- Visualization and Visual Data Mining
- Spatial Decision Support Systems and Participatory GIS

The main regional foci are Latin America, Western Europe, the Pacific Rim, Mexico-U.S. borderlands, Sub Saharan Africa, and semi-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) English language 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\\_apply.html](http://geography.sdsu.edu/Programs/Masters/m_apply.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.
- (4) Copies of GRE (and TOEFL, if applicable) scores;
- (5) Current resume or vitae.

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

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

Admission application deadlines for the upcoming fall semester are given at [http://geography.sdsu.edu/Programs/Masters/m\\_apply.html](http://geography.sdsu.edu/Programs/Masters/m_apply.html). 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 English language 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 Four of this bulletin.

### **Specific Requirements for the Master of Arts Degree**

#### **(Major Code: 22061) (SIMS Code: 112901)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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) (SIMS Code: 112991)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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 (SIMS Code: 112990)**

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 (SIMS Code: 112995)**

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) (SIMS Code: 112901)**

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.

**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 not 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 or methodological 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.

## Courses Acceptable on Master's and Doctoral Degree Programs in Geography (GEOG)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### UPPER DIVISION COURSES

#### **GEOG 505. Fluvial Geomorphology (3)**

Prerequisite: Geography 401.

Physical foundation of river systems. Geographic variability in river channels and influence of human activities on fluvial forms and processes. Role of fluvial geomorphology in river and watershed management. Field trips may be arranged.

#### **GEOG 506. Landscape Ecology (3)**

Prerequisite: Geography 101. Recommended: Geography 370 or 385.

Links between landscape patterns and ecological processes at a variety of spatial scales to include causes and measures of landscape patterns, effects of landscape patterns on organisms, landscape models, landscape planning and management.

#### **GEOG 507. Geography of Natural Vegetation (3)**

Prerequisite: Geography 401.

The natural vegetation associations of the world, their distribution, classification and development, including relationship to human activities. Field trips may be arranged.

#### **GEOG 509. Regional Climatology (3)**

Prerequisite: Geography 101 or 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)**

Prerequisite: 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)**

Prerequisite: Geography 354.

Worldwide trends in urbanization. Case studies of selected cities from various culture areas with focus on international variations in city structure and urban problems.

#### **GEOG 556. Cultures of Cities (3)**

Prerequisite: Geography 354 or three units of upper division coursework in a related field.

Character and internal structure of North American cities with a focus on cultures (political, social ethnic, business, architectural) that shape them. Topics include immigrant neighborhoods, gentrification, gated communities, and processes of decline and revitalization. Field trips may be arranged.

#### **GEOG 559. Urban Transportation Geography (3)**

Prerequisite: Three units of upper division urban or transportation coursework in geography or related field.

Urban transportation networks and their effects, past, present and future, on the economy and physical structure of the urban region. Field trips may be arranged.

#### **GEOG 570. Environmental Resource Conservation (3)**

Prerequisite: Geography 370.

Management of environmental and natural resources. Effective programs and the institutional frameworks in which they occur.

#### **GEOG 572. Land Use Analysis (3)**

Prerequisite: Geography 370.

Problems of maintaining environmental quality in the process of land conversion from rural to urban uses with emphasis on land capability and suitability studies. Field trips may be arranged.

#### **GEOG 573. Population and the Environment (3)**

Prerequisite: Geography 102.

Population distribution, growth, and characteristics as they relate to environmental degradation, both as causes and consequences. Roles of women, sustainable development, carrying capacity, optimum population, and policy initiatives in relationships between population and environment.

#### **GEOG 574. Water Resources (3)**

Prerequisites: Geography 370 and 375.

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)**

Prerequisite: 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.

Prerequisite: Geography 381.

Computer-assisted map production techniques with emphasis on map design and color use.

#### **GEOG 583. Internet Mapping and Distributed GIServices (3)**

Two lectures and three hours of laboratory.

Prerequisite: Geography 381 or 484.

Current development of Internet mapping and cartographic skills for web-based maps (multimedia, animation, and interactive design). Fundamental theories of distributed GIS to support Internet mapping with focus on distributed component technologies, Internet map servers, and web services.

#### **GEOG 584. Geographic Information Systems Applications (3)**

Two lectures and three hours of laboratory.

Prerequisite: Geography 484.

Spatial analysis methods in GIS, to include terrain, raster, and network analysis. Feature distributions and patterns. GIS data processing techniques to include spatial interpolation, geocoding, and dynamic segmentation. Designing and executing analytical procedures.

#### **GEOG 585. Quantitative Methods in Geographic Research (3)**

Prerequisite: Geography 385.

Application of statistical techniques to geographic research to include simple regression and correlation, multiple regression, geographically weighted regression, classification, factor analysis, and computer applications.

#### **GEOG 586. Qualitative Methods in Geographic Research (3)**

Prerequisite: Geography 102.

Application of qualitative techniques to geographic research including reflexive survey design and in-depth interviews, non-obtrusive methods, landscape interpretation, textual methods and discourse analysis, feminist criticism, and humanistic and historical materialist perspectives on measurement.

#### **GEOG 587. Remote Sensing of Environment (4)**

Three lectures and three hours of laboratory.

Prerequisite: Geography 101. Recommended: Physics 180A-180B.

Techniques for acquiring and interpreting remotely sensed data of environment. Electromagnetic radiation processes, aerial photographic systems, and human interpretation of aerial and satellite imagery. Geographic analysis of selected terrestrial, oceanographic, and atmospheric processes and resources.

#### **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)**

Prerequisite: 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.

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

Prerequisite: 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)**

Prerequisite: 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.

Prerequisite: Concurrent registration in Geography 683.

Data processing and analysis in geographic information systems. Applications of overlay functions in spatial analysis.

### **GEOG 685. Advanced Quantitative Methods in Geography (3)**

Prerequisite: Geography 585.

Statistical techniques and quantitative models applied to spatial problems. Multiple regression, discriminant analysis, factor analysis and spatial modeling.

### **GEOG 688. Advanced Remote Sensing (3)**

Prerequisite: Geography 588.

Sensor systems, image interpretation and geographic applications in thermal infrared and microwave remote sensing. Principles of digital image processing.

### **GEOG 688L. Advanced Remote Sensing Laboratory (1-2)**

Two or four hours of laboratory.

Prerequisite: Concurrent registration in Geography 688.

Processing and analysis of remotely sensed data. Laboratory training in sensor systems and digital image-processing methods including thermal infrared and microwave data analysis.

### **GEOG 696. Advanced Special Topics in Geography (3)**

Prerequisite: Consent of instructor.

Advanced special topics in geography. 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)**

Prerequisite: Graduate standing.

Definition of spatial problems, hypothesis formulation and testing, selection of appropriate methodology. Development of research proposals, conduct of research, written and oral presentations.

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

Prerequisite: Graduate standing.

Evolution of concepts concerning the nature, scope, theories, and methodologies of geography.

### **GEOG 710. Seminar in Physical Geography (3)**

Prerequisite: Six units of upper division or graduate level courses in physical geography.

Intensive study of an aspect of physical geography. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

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

Prerequisite: Six units of upper division or graduate level courses in human geography.

Intensive study of a spatial aspect of human geography. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

### **GEOG 760. Seminar in Behavioral and Social Geography (3)**

Prerequisite: Six units of upper division or graduate level courses in behavioral or social geography.

Intensive study of a spatial aspect of behavioral or social geography. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

### **GEOG 770. Seminar in Environmental and Resource Conservation (3)**

Prerequisites: Geography 670 and six units of upper division or graduate level courses in environmental or resource conservation.

Natural and environmental resource conservation. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

### **GEOG 780. Seminar in Techniques of Spatial Analysis (3)**

Prerequisite: Six units of upper division or graduate level courses in spatial analytic techniques.

Spatial analytic techniques from image processing, remote sensing, geographic information systems, cartography or quantitative methods. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

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

Research in one of the fields of geography. Maximum credit six units applicable to a master's degree.

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

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

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

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

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

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

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

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

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

## **DOCTORAL COURSES**

### **GEOG 890. Independent Study for Doctoral Examination (1-9) Cr/NC**

Prerequisite: Consent of instructor or graduate adviser.

Tutorial with student's major professor in preparation for qualifying examinations. No unit credit allowed toward advanced degree. Maximum credit nine units.

### **GEOG 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Independent investigation in the general field of the dissertation. A written proposal must be approved by the joint doctoral advising committee. Maximum credit six units applicable to a doctoral degree.

### **GEOG 899. Doctoral Dissertation (1-15) Cr/NC/RP**

Prerequisites: Advancement to candidacy and an officially constituted dissertation committee.

Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved. No unit credit allowed toward advanced degree.

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# Geological Sciences

In the College of Sciences

**OFFICE: Geology/Mathematics/Computer Science 237**

**TELEPHONE: 619-594-5586 / FAX: 619-594-4372**

**E-MAIL: [department.office@geology.sdsu.edu](mailto:department.office@geology.sdsu.edu)**

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

## Faculty

David L. Kimbrough, 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

Gary H. Girty, 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

Aaron J. Pietruszka, Ph.D., Associate Professor of Geological  
Sciences

Stephen A. Schellenberg, Ph.D., Associate Professor of Geological  
Sciences

Kathryn W. Thorbjarnarson, Ph.D., Associate Professor of Geological  
Sciences (Graduate Adviser)

Shuo Ma, Ph.D., Assistant Professor of Geological Sciences

Barry B. Hanan, Ph.D., Resident Isotope Geochemist

Victory E. Camp, Ph.D., Geological Sciences

## Adjunct Faculty

Margaret R. Eggers, Ph.D., Geological Sciences

John M. Fletcher, Ph.D., Geological Sciences

John A. Izbicki, Ph.D., Geological Sciences

Eleanora I. Robbins, Ph.D., Geological Sciences

Akhaury K. Sinha, Ph.D., Geological Sciences

## The Rollin and Caroline Eckis Chair in Seismology

A gift from Rollin and Caroline Eckis, combined with matching funds from the Atlantic Richfield Company and contributions from SDSU faculty and staff, established The Rollin and Caroline Eckis Chair in Seismology at SDSU. The late Rollin Eckis was former president of Richfield Oil Company and vice chairman of the board of Atlantic Richfield Company.

The first appointee to the chair, Dr. Steven M. Day, conducts research on the mechanics of earthquakes and earthquake hazards.

## Associateships

Graduate teaching associateships in geological sciences are available to a limited number of qualified students. Application forms and additional information may be secured from the graduate adviser of the department. 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 the earth sciences for students planning on entering a Ph.D. program.

## Section I. Master's Degree Program

### General Information

The Department of Geological Sciences offers graduate study leading to the Master of Science degree in geological sciences. The program emphasizes research and an advanced set of courses. Faculty research activities comprise a broad spectrum of expertise, including both theoretical and applied interests. Opportunities exist for

integrated field and laboratory research. The department is equipped to support research in geophysics, groundwater hydrology, 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 for M.S. Degree

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) English language 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.

## Geological Sciences

### Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as stated in Part Four of this bulletin.

### Specific Requirements for the Master of Science Degree

(Major Code: 19141) (SIMS Code: 775301)

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 Four 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.

## Section II. Doctoral Program

<http://geology.sdsu.edu>

### Geophysics

(Major Code: 19160) (SIMS Code: 775370)

#### General Information

The cooperating faculties of the Department of Geological Sciences at San Diego State University and the Geophysics Curricular Program of the Scripps Institution of Oceanography Graduate Department at the University of California, San Diego offer a joint doctoral program in geophysics. The complementary specialties of the two groups result in two focus areas: earthquake science and applied geophysics. Each student's program is designed around one of these two areas.

#### Admission to Doctoral Study

Applicants for admission to the doctoral program in geophysics offered jointly by SDSU and UCSD must meet the requirements as outlined under General Requirements for Doctoral Degrees given in Part Four of this bulletin. Admission into the program requires

acceptance by the graduate deans and by the participating departments at UCSD and SDSU. Candidates for admission should have a bachelor's or master's degree in physics, mathematics, earth science, or equivalent training; degrees in engineering science are also accepted. The student's preparation should include:

1. Mathematics through differential and integral calculus.
2. Physics, one year with laboratory (the course should stress the fundamentals of mechanics, electricity, magnetism, optics, and thermodynamics, and should use calculus in its exposition).
3. Chemistry, one year with laboratory.
4. An additional year of physics, chemistry, or mathematics.

Students seeking admission to the joint doctoral program in geophysics should electronically submit the university application available at <http://www.csumentor.edu>. Application deadlines and contact information for the joint doctoral program coordinator are available at <http://geology.sdsu.edu>.

In addition, all applicants must submit the following admissions materials separately to SDSU Graduate Admissions and to the Department of Geological Sciences, San Diego State University.

A. 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 or mailed directly from the issuing institution) from all postsecondary institutions attended (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) English language score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

B. The following materials should be mailed as a complete package to:

Department of Geological Sciences  
(Attention: Joint Doctoral Program Coordinator)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1020

(1) Three letters of recommendation  
(in sealed and signed envelopes);

(2) Curriculum vitae or resume;

(3) Applicant's statement of purpose in seeking the Ph.D.

A scholastic average of B (3.0 /4.0) or better in upper-division courses, or prior graduate study, is required. Special consideration occasionally can be given to candidates with outstanding records who do not meet all preadmission criteria, but such students should expect to take additional courses to improve their backgrounds.

Satisfaction of the minimum requirements at San Diego State University or the Department of Geological Sciences does not guarantee admission to the doctoral program.

#### Specific Requirements for Doctoral Program

##### 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 UCSD and SDSU. Usually, the first year is spent at UCSD; the second and subsequent years at SDSU.

##### Advising Committee

Upon admission to the program, the joint doctoral graduate advisers of the two institutions will establish an advising committee for each student. The committee will consist of four faculty members, normally two from each campus. In consultation with the student, the committee will develop a course of study, including identifying

academic deficiencies and recommending remedies for them. The advising committee will be the official advising group for the student until a joint doctoral committee has been chosen and recommended to the Graduate Divisions by the advising committee.

#### Language Requirement

There is no specific foreign language requirement for this program, but knowledge of a foreign language may be deemed necessary by the advising committee to successfully pursue the student's research goal. All students must be proficient in English.

#### Course Requirements

There is no single course of study appropriate to the geophysics doctoral program. Instead, the individual interests of the student will permit, in consultation with the advising committee, a choice of course work in earthquake science or applied geophysics, although certain core courses are usually taken during most of the first year. In the summer or early fall following the first year of study each student will take the departmental examination which is both written and oral. The foundation for this examination is laid by the core courses.

#### Departmental Examination

Doctoral candidates normally will be required to take a departmental examination not later than early in the second year of study. The examination will be oral and written. The examination tests the student's general preparation in geophysics and associated areas (e.g., geology, math, computer programming). The student will be required to demonstrate, in a quantitative and analytical manner, comprehension of required subject material and of the pertinent interactions. Part of the examination is based on the knowledge of a number of assigned journal articles. The oral examination includes a discussion of the student's research progress.

#### Qualifying Examinations

##### Joint Doctoral Committee

After the student has passed the departmental examination, a joint doctoral committee will be appointed. The joint doctoral committee must be formed before the student may proceed to the qualifying examination. The student will select a dissertation supervisor (major professor), who will chair the joint doctoral committee. The joint doctoral committee shall be composed of at least four members of the joint doctoral program faculty, two from the SDSU department and two from the UCSD department. The committee may be augmented as needed by an additional member from outside geophysics at UCSD or a member of the faculty at SDSU from outside of geophysics or, when authorized, another university. 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 Examination

The joint doctoral committee will determine the student's qualifications for independent research by means of a qualifying examination which will be administered no later than the end of the third year. The qualifying examination is an exploration of the research project, its feasibility, originality and appropriateness. The student must write a concise report describing his or her proposed original research project and give an oral presentation to the joint doctoral committee covering the planned work and any progress to date. The student's joint doctoral committee will conduct the oral qualifying examination to ensure that the student possesses the full knowledge and competence required to carry out her or his dissertation research proposal. Passing the oral presentation and defense of this proposal signifies that the doctoral dissertation proposal is approved.

Upon satisfactory completion of the oral qualifying examination and prescribed coursework, the student must apply to the graduate dean at UCSD for advancement to candidacy. Upon payment of the candidacy fee to UCSD, and after approval by the graduate deans of both campuses, students will be notified of their advancement to candidacy by the UCSD graduate dean.

#### Dissertation

Following the successful completion of all prescribed coursework and qualifying examination, the major remaining requirement for the Ph.D. degree will be the satisfactory completion of a dissertation consisting of original research of publishable quality carried out under

the guidance of the major professor. Approval of the completed dissertation by the joint doctoral committee implies that an organized investigation yielding substantial conclusions of interest which expand the frontiers of knowledge and understanding in the discipline has been carried out. Results must be reported in a manner demonstrating the ability of the candidate to effectively prosecute and report independent investigation.

The requirement for completing and filing the dissertation, including the number of copies required, will be decided jointly by the graduate deans and in accordance with regulations of the Graduate Divisions.

#### Final Examination

The final examination, organized and administered by the joint doctoral committee, shall consist of a dissertation defense, before the joint doctoral committee with the public invited.

#### Award of the Degree

The Doctor of Philosophy degree in geophysics 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 Geological Sciences at SDSU has teaching assistantships and fellowships available on a competitive basis and research assistantships and internships are available from research grants and contracts or through industry contacts. All students applying for admission to the joint doctoral program will be considered for financial support.

#### 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:

Committee Members: Day, Ma, Olsen, Rockwell.

##### University of California, San Diego:

Committee Members: Agnew, Bock, Constable, Dorman, Fialko, Harding, Minster, Sandwell, Shearer, Vernon.

### Courses Acceptable on Master's and Doctoral Degree Programs in Geological Sciences (GEOL)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

#### UPPER DIVISION COURSES

##### 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.

Prerequisite: Geological Sciences 306.

Investigation of individually assigned areas, preparation of geologic maps, geologic sections, and gathering other types of data, e.g., petrologic, geophysical, or paleontologic, as appropriate. Students are responsible for cost of food and transportation. Students must demonstrate the physical ability to adequately and safely perform fieldwork under varying weather conditions; in steep, uneven or rocky terrain; for long periods of time.

##### GEOL 514. Process Geomorphology (3)

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 306.

Processes shaping and affecting the earth's surface, and application of resultant land forms in interpretation of geologic structure, stratigraphy, and neotectonics.

##### GEOL 520. Ore Deposits (3)

Prerequisite: Geological Sciences 306.

Geologic relations, origin, distribution, and economics of metallic and nonmetallic mineral deposits.

## Geological Sciences

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### GEOL 521. Petroleum Geology (3)

Prerequisite: Geological Sciences 306.

History of petroleum exploration; statistics of energy use; principles of well logging; theories of petroleum generation, migration, and accumulation; exploration and production techniques; case studies of important oil fields.

### GEOL 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.

### 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 537. Geobiology (3)

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 205 and either Biology 100-100L, 101-101L or 203-203L, and Geological Sciences 336.

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 545. Descriptive Physical Oceanography (3)

Prerequisites: Mathematics 121 and 122, or 150; Physics 180A or 195.

Physical environment of oceans including heat, water, and salt budgets, physical properties of sea water, sea ice, air-sea relationships, effects of light and sound, distribution of temperature, salinity, density, surface current, deep circulation, water mass formation, instruments and methods of study.

### GEOL 550. Engineering Geology (3)

Two lectures and three hours of laboratory.

Prerequisite: Geological Sciences 306.

Relationships between geologic processes and works of humans. Topics include rock and soil mechanics, ground water flow, slope stability, seismicity, land subsidence, and evaluation of geologic materials with respect to dam sites, tunnel alignments, and building foundations.

### GEOL 551. Hydrogeology (3)

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.

Prerequisite: 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.

### GEOL 596. Advanced Topics in Geology (1-4)

Prerequisite: 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.

Prerequisite: Consent of instructor.

An intensive study in advanced geology. May be repeated with new content. Topic to be announced in the *Class Schedule*. Maximum credit six units applicable to a master's degree.

### GEOL 622. Seminar: Sedimentary Basin Analysis (3)

Prerequisite: Geological Sciences 336.

Stratigraphy and sedimentology of sedimentary basins and geologic controls. Topics include stratigraphic and sedimentologic tools, facies analysis, subsurface basin mapping, cyclicity, tectonic models, and economic resources.

### GEOL 625. Paleocology (3)

Two lectures and three hours of laboratory.

Prerequisites: Geological Sciences 537 and Biology 354.

Problems and methods in the study of relationships between fossil organisms and their environment: interpretation of paleoenvironment, paleoclimate, and biologic relationships among fossil organisms.

### GEOL 630. Selected Topics in Geophysics (3)

Prerequisite: Consent of instructor.

Research topics in seismic, gravity, magnetic, electrical, and electromagnetic methods. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

### GEOL 631. Simulation of Wave Propagation in Complex Media (3)

Prerequisite: 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)

Prerequisite: 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.

Prerequisite: 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.

Prerequisite: Geological Sciences 336.

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)**

Prerequisite: Geological Sciences 306.  
Topics in advanced structural geology in the light of petrographic, geophysical, and experimental data, combined with classic field observations.

**GEOL 651. Applied Groundwater Flow Modeling (3)**

Two lectures and three hours of laboratory.  
Prerequisites: Geological Sciences 551 and experience in computer programming.  
Analytical and numerical computer modeling of unsaturated and saturated flow. Application of MODFLOW to analyze groundwater hydrologic scenarios.

**GEOL 660. Isotope Geology (3)**

Prerequisite: 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 675. Groundwater Geochemistry (3)**

Prerequisites: Chemistry 201 and Mathematics 150.  
Processes affecting inorganic solutes in groundwater. Applications to groundwater geochemical evolution, weathering processes, and inorganic contaminant transport.

**GEOL 676. Aquifer Characterization and Solute Transport (3)**

Prerequisite: Geological Sciences 551.  
Theory and practice of aquifer characterization by hydraulic aquifer tests and tracer tests. Modeling of advection, dispersion, sorption, and transformation of dissolved solids.

**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 686. Advanced Igneous Petrology (3)**

Prerequisite: Geological Sciences 324.  
Physical and chemical processes within earth's mantle and crust leading to generation of igneous rocks in variable tectonomagmatic environments. Not open to students with credit in Geological Sciences 600, Seminar: Advanced Igneous Petrology.

**GEOL 687. Volcanology (3)**

Prerequisite: 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 690. Earthquake Physics I (3)**

Prerequisite: Geological Sciences 560. Recommended: Mathematics 342B.  
Structure and theology 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**

Prerequisite: Consent of the department.  
Supervised research in an area of geological sciences. Maximum credit six units applicable to a master's or Ph.D. degree.

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

Prerequisites: An officially appointed thesis committee and advancement to candidacy.  
Preparation of a thesis for the master's degree.

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

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

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

**GEOL 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

**DOCTORAL COURSES**

**GEOL 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisite: Admission to doctoral program.  
Independent investigation in general field of the dissertation.

**GEOL 898. Doctoral Special Study (1-8) Cr/NC/RP**

Prerequisite: Admission to doctoral program.  
Individual study in field of specialization. Maximum credit eight units applicable to doctoral degree.

**GEOL 899. Doctoral Dissertation (1-15) Cr/NC/RP**

Prerequisite: An officially constituted dissertation committee and advancement to candidacy.  
Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.

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# 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: Anne Donadey, Ph.D.**

## 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.

## Courses (GERMN)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### 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)**

Prerequisite: 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)**

Prerequisite: Eighteen upper division units in German.

Intensive study in specific areas of German. May be repeated with new content. See *Class Schedule* for specific content. 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.

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# Gerontology

In the School of Social Work  
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 Social Work  
Jong Won Min, Ph.D., Associate Professor of Social Work  
Eunjeong Ko, Ph.D., Assistant Professor of Social Work  
Yawen Li, Ph.D., Assistant Professor of Social Work

## Adjunct Faculty

Anthony D'Angelo, M.S., 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 School of Social Work.

## General Information

The Master of Science degree in gerontology is supported by faculty from several departments. The program is administered by the School of Social Work. 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 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) English language score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

### School of Social Work

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

School of Social Work  
(Attention: Gerontology Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4452

- (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 Four 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) (SIMS Code: 551904)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Science degree as described in Part Four 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:

	<b>Units</b>
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 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.

### Courses Acceptable on Master's Degree Program in Gerontology (GERO)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

#### UPPER DIVISION COURSES

##### **GERO 520. Analysis of Programs for the Aging (3)**

Prerequisite: One upper division course in gerontology.

Major programs in aging that support daily functioning of elderly. Effectiveness of programs in serving today's elderly with attention to ethnic and cross-cultural variations.

##### **GERO 522. International Issues on Aging (3)**

Prerequisite: Three units in gerontology.

Socio-economic implications of rapidly growing number and proportion of older people around the world. Comparative study of aging populations in different countries, analysis and evaluation of related policies and programs.

##### **GERO 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)**

Prerequisite: Consent of instructor.

Concepts and theory in gerontology, theory construction, application of theory to research. Theoretical models and special topics.

##### **GERO 602. Policy Development, Analysis, and Evaluation (3)**

Prerequisites: Gerontology 601 and consent of instructor.

History, analysis, and assessment of current state and national policies and policy impacts on older people. Policy evaluation and recommendations from identification of gaps in policy that impact older people's access to programs and services. Conduct legislative visits and interact with policy-makers.

##### **GERO 603. Healthy Aging (3)**

Prerequisite: Consent of instructor.

Concepts of healthy aging. Analysis of approaches, methods, and applications from research about lifestyle, behavior change, prevention and health promotion, community health, work and productivity, belief systems, cognitive assessments. Emphasis on prevention and maintenance of health.

##### **GERO 605. Long-Term Care (3)**

Prerequisite: Consent of instructor.

Issues and problems in a changing long-term care delivery system for older people in a multi-cultural society. Emphasis on frailty of the elderly, demand for affordable long-term care, and analysis of federal and state policies shaping the industry.

##### **GERO 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)**

Prerequisite: A graduate level course in gerontology.

Areas of gerontology and geriatrics that make an immediate impact on the quality of life and lifestyles of the elderly. To include diverse life situations of older people. 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**

Prerequisite: Consent of instructor.

Research in an area of gerontology. Maximum credit six units applicable to a master's degree.

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

Prerequisite: Consent of adviser.

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

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

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

Preparation of a thesis for the master's degree.

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

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

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

##### **GERO 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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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)

Elizabeth Cobbs Hoffman, Ph.D., Professor of History, The Dwight E.  
Stanford Chair in American Foreign Relations

Eve Kornfeld, Ph.D., Professor of History

Mathew S. Kuefler, 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

Thomas P. Passananti, Ph.D., Associate Professor of History

Elizabeth Ann Pollard, Ph.D., Associate Professor of History

John C. Putman, Ph.D., Associate Professor of History

Chiou-Ling Yeh, Ph.D., Associate Professor of History

Andrew J. Abalakin, Ph.D., Assistant Professor of History

Edward J. Blum, Ph.D., Assistant Professor of History

Sandra S. Campbell, Ph.D., Assistant Professor of History

Walter D. Penrose, 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, (2) those who anticipate further study leading to a doctoral degree in history or related fields, and (3) those who plan to teach history at the secondary or community college levels.

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 in an acceptable earned baccalaureate degree or in the last 60 semester (90 quarter) units attempted and 3.0 in the major (not necessarily history), plus a satisfactory score on the GRE General Test (minimum 500 verbal score). Applicants holding an acceptable post-baccalaureate degree earned at an institution accredited by a regional accrediting association also meet minimum qualifications.

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) English language 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 Four 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) (SIMS Code: 113301)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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.

## Courses Acceptable on Master's Degree Program in History (HIST)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

**NOTE: Courses for Field (A) Thematic, Comparative, and Interdisciplinary History; or Field (B) The Ancient Through Early Modern World; or Field (C) The Modern World, are identified in the course title as (A), (B), or (C).**

### HIST 500. Topics in Ancient History (A) (3)

Prerequisite: Upper division or graduate 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 501. History of Ancient Near Eastern Civilizations (B) (3)

Major civilizations of Near East from the origin of civilization to Roman Conquest, including Egyptians, Babylonians, Hebrews, and Persians. Social, political, and religious problems.

### HIST 502. Ancient Greece (B) (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 (B) (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 504. The Early Middle Ages (B) (3) (Same course as Humanities 504)

Europe and Mediterranean 300-1100 C.E. through various approaches: political, economic, social, and cultural. Collapse of Roman Empire, transformation of classical culture and regions that claimed its heritage: especially the kingdoms of western Europe, but also Byzantine and Arab empires. (Formerly numbered History 404.)

### HIST 505. The Later Middle Ages (B) (3)

Europe and the Mediterranean 1100-1450 C.E. through various approaches: political, economic, social, and cultural. Development of kingdoms of western Europe and relationship to Byzantine empire and other states. (Formerly numbered History 405.)

### HIST 506. The Renaissance (B) (3) (Same course as Humanities 506)

Intellectual, artistic, social, and economic transformation in Europe from fourteenth to seventeenth centuries.

### HIST 507. The Reformation (B) (3) (Same course as Religious Studies 507)

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 509. British Century: Waterloo to World War I (C) (3)

Prerequisite: Upper division or graduate 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 (C) (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 (C) (3)

Europe in the age of dictatorship, world war, decline, and recovery.

### HIST 513. Early Scandinavia (B) (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 516. Imperialism and the Colonial Experience (A) (3)

Prerequisite: Upper division or graduate 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 517. Modern Germany (C) (3)

Political, social, and economic development of Germany from 1848 to present.

### HIST 527. The Holocaust in Feature Films (A) (3) (Same course as European Studies 527)

Two lectures and two hours of activity.

Prerequisite: Upper division or graduate standing.

Depiction of the Nazi policy of destroying European Jewry and its impact on the perpetrators, bystanders, victims, and the post-war world in feature films.

### HIST 528. Social History of Early Modern Europe (B) (3)

Historical survey of European society emphasizing changes in the family, health, diet, standard of living, urbanism, crime, migration, and literacy, from 1350 to beginning of Industrial Revolution.

### HIST 530. Colonial America (B) (3)

Settlement and development of the English colonies in North America through the mid-eighteenth century. Contact of cultures, social structure, labor systems, religion, popular values, problems of imperial control, and political culture.

**HIST 532. Topics in Early American History (B) (3)**

Prerequisites: Upper division or graduate 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 533. Antebellum America (C) (3)**

Prerequisite: Upper division or graduate standing.

Westward expansion and movement, market revolution, democratic politics, revivalism, slavery, and women's rights. (Formerly numbered History 533A.)

**HIST 534. Civil War and Reconstruction (C) (3)**

Prerequisite: Upper division or graduate standing.

Civil War and Reconstruction, emphasizing political affairs and role of Lincoln. (Formerly numbered History 533B.)

**HIST 535. The Age of Roosevelt (C) (3)**

The United States in Depression, War, and Cold War. (Formerly numbered History 535B.)

**HIST 536. The United States Since World War II (C) (3)**

Major foreign and domestic issues confronting the United States, and the government policies and popular movements generated in response.

**HIST 538. American Religious History (A) (3)**

Prerequisite: Upper division or graduate standing.

Religious ideas, leaders, movements, institutions, and ideologies throughout United States history. Religious change over time and connections between religion and colonialism, nationalism, politics, race, class, gender, sexuality, war, diversity, justice, and material culture.

**HIST 539. Topics in the History of the American West (C) (3)**

Prerequisites: Upper division or graduate 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 543. Vietnam Wars (C) (3)**

Prerequisites: Upper division or graduate 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 (C) (3)**

Development of American foreign relations from Colonial Period to the Spanish-American-Filipino War.

**HIST 544B. Modern American Foreign Relations (C) (3)**

Development of American foreign relations since 1900.

**HIST 545. Constitutional History of the United States (C) (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 548. Race and Ethnicity in United States History (A) (3)**

Prerequisite: Upper division or graduate 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 550. Colonial Mexico (B) (3)**

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 551. Modern Mexico (C) (3)**

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 558. Latin America in World Affairs (C)(3)**

History of Latin America's political and economic relations with Europe, the Soviet Union, the United States, and the Third World.

**HIST 563. Southeast Asia to 1800 (B) (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 564. Southeast Asia in the Modern World (C) (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 566. Chinese Civilization: The Great Traditions (B) (3)**

China's institutional and cultural development from ancient to pre-modern times. Emphasis on traditional philosophy, religions, literature, and the arts.

**HIST 567. China in Revolution (C) (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 (C) (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 (C) (3)**

Arab-Israeli conflict and diplomacy over Palestine from perspectives of Zionism, Arab nationalism, and Great Power relations from nineteenth century to present.

**HIST 581. Topics in Urban History (A) (3)**

Prerequisite: Upper division or graduate 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 (A) (3)**

Prerequisite: Upper division or graduate 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 (A) (3)**

Prerequisite: Upper division or graduate 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 (A) (3)**

Prerequisite: Upper division or graduate 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 585. History of the Sixties (C) (3)**

Prerequisite: Upper division or graduate 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.

### **HIST 596. Selected Studies in History (A) (B) (C) (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.

#### **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)**

Prerequisite: Consent of instructor.

Selected readings in historical literature and primary sources in a designated area of European history. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

### **HIST 630. Directed Readings in United States History (3)**

Prerequisite: Consent of instructor.

Selected readings in historical literature and primary sources in a designated area of United States history. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

### **HIST 640. Directed Readings in Latin American History (3)**

Prerequisite: Consent of instructor.

Selected readings in historical literature and primary sources in a designated area of Latin American history. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

### **HIST 650. Directed Readings in Asian History (3)**

Prerequisite: Consent of instructor.

Selected readings in historical literature and primary sources in a designated area of Asian history. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

### **HIST 665. Seminar in History (3)**

Prerequisites: History 601; six units selected from History 620, 630, 640, 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)**

Prerequisite: Consent of instructor.

Selected readings in comparative, interdisciplinary, and topical history. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

### **HIST 696. Special Topics in History (1-3)**

Prerequisite: Consent of instructor.

Intensive study in specific areas of history. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### **HIST 795. Area Studies in History (3) Cr/NC**

Prerequisite: Advancement to candidacy.

Preparation for the comprehensive examinations in two 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**

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

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

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

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

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

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

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

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

### **HIST 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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# Homeland Security

In the College of Sciences

**OFFICE: Industrial Technology 94**

**TELEPHONE: 619-594-4041**

**FAX: 619-594-4065**

**<http://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  
Stephanie Kay Brodine, M.D., Professor of Public Health, Division  
Head of Epidemiology and Biostatistics  
Mary Ann Lyman-Hager, Ph.D., Professor of French, Co-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  
Academic 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., Distinguished Professor of Chemistry and  
Biochemistry  
Murray Jennex, Ph.D., Associate Professor of Management  
Information Systems  
Khaleel Mohammed, Ph.D., Associate Professor of Religious Studies  
Emmanuel Rudatsikira, Dr.P.H., Associate Professor of Public Health,  
Director of the Global Emergency Preparedness and Response  
Program, Co-Director of the Institute for Public Security and Health  
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 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.

## Study Abroad and Comparative Homeland Security

The homeland security program emphasizes international and comparative approaches in the educational process. To that end, study abroad is required for all students in the homeland security program. Short-term (one to two weeks), semester, and academic year study abroad opportunities are provided in countries such as Afghanistan, Australia, Canada, China, England, France, Germany, India, Indonesia, Kazakhstan, Kyrgyzstan, Mexico, Morocco, The Netherlands, The Philippines, Poland, Russia, Spain, and Turkey.

Of particular note the homeland security program sponsors a semester study abroad program in India that allows select students to earn up to two semesters of full-time academic credit while conducting intensive research in India. The India program is not mandatory. Rather, it provides homeland security students a program-based semester-length study abroad option for meeting their study abroad requirement.

The India study-abroad program is set up for enrolled students in the homeland security program to study and conduct research in India while earning course-related credits based on a four-month course structure available during the spring and fall semesters. The study abroad program is restricted to graduate students in good academic standing at SDSU and with two faculty recommendations. Graduate students from outside of the program will be considered on a case-by-case basis.

Students are encouraged to apply for the India program after completing at least nine units of graduate study at SDSU (six of these nine units must come from H SEC 601, 602, 603, or 604). A maximum of two semesters or 18 units can be earned by any student in the study abroad program during a two semester (eight month) stay in India, though it is anticipated that most individual student programs of study will accommodate just one semester or nine unit courses of study.

Courses offered as part of this India program will be drawn from the homeland security course list on a semester-by-semester basis. The courses will include examinations, essays, reports, and preparation of journal papers presenting research findings and lessons learned. The courses will be taught with a focus on comparative approaches to enhance homeland security, infrastructure protection, and humanitarian assistance disaster relief for the region.

In addition to the India program, the proximity of San Diego State University to the Mexican state of Baja California Norte allows for a number of convenient study abroad experiences that are rare for many American universities. For example, one can live in San Diego and takes courses at Mexican universities that have student exchange agreements with SDSU. Students may also pursue a graduate-level certificate in Transborder Public Administration and Governance through the School of Public Affairs and/or take advantage of the homeland security program's U.S. and Mexico-based courses on border security. Language and cultural learning opportunities are provided by SDSU's congressionally established Language Acquisition Resource Center.

Please contact the co-directors of the homeland security program for more information on study abroad opportunities.

### Admission to Graduate Study

The homeland security program accepts admission for both the fall and spring semesters. The application deadlines are posted on the Web site at <http://homelandsecurityprogram.sdsu.edu> or can be obtained from the homeland security program directors 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 30 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) English language 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:  
Homeland Security Program Admissions Committee  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1020

- (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 Four of this bulletin.

### Specific Requirements for the Master of Science Degree

(Major Code: 22102) (SIMS Code: 779001)

In addition to meeting the requirements for the Master of Science degree, as described in Part Four of this bulletin, students must complete 30 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 (30 units)

##### I. 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)        |

**II. Homeland Security electives:** Six units in consultation with program adviser.

**III. Non-Homeland Security electives:** Six units in consultation with program adviser.

**IV. Study Abroad (3 units).** All homeland security graduate students are required to complete a homeland security-related study abroad experience. To meet this requirement, students must complete one of the following with the preapproved and written consent of the program adviser:

1. H SEC 650 Homeland Security Study Abroad (3 or 6);
2. H SEC 652 Border Security: The Case of Mexico (3);
3. A CSU Study Abroad Program;
4. An SDSU Exchange Program;
5. An SDSU Semester Abroad Program;
6. An SDSU Travel Study Program;
7. A homeland security practicum, special topics, special study, or research conducted abroad.

See the program adviser to make arrangements to meet the study abroad requirement.

**V. 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.

### Courses Acceptable on Master's Degree Program in Homeland Security (H SEC)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

#### GRADUATE COURSES

##### H SEC 601. Seminar in Homeland Security (3)

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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 625. Seminar in Terrorism and Counterterrorism (3)**

Prerequisites: Graduate standing and consent of instructor.

Theories and practice of terrorism and counterterrorism on domestic and international levels. Current and historical trends in terrorism. Challenges and opportunities in countering terrorism. Global perspectives on counterterrorism policies.

**H SEC 650. Homeland Security Study Abroad (3)  
(Offered only in Extension)**

Prerequisite: 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. Contact program adviser for more information.

**H SEC 651. Border Security: The Case of the United States (3)  
(Offered only in Extension)**

One lecture and four hours of activity.

Prerequisites: Graduate standing and consent of instructor.

Interdisciplinary analysis of social ecology of borders and its impact on border security. Technologies used for border security. Field visits in U.S. to assess infrastructure and geography. Contact program adviser for more information.

**H SEC 652. Border Security: The Case of Mexico (3)  
(Offered only in Extension)**

One lecture and four hours of activity.

Prerequisites: Graduate standing and consent of instructor. Valid U.S. passport, foreign travel and repatriation insurance, and approval of Office of International Programs.

Interdisciplinary analysis of social ecology of borders and its impact on border security. Technologies used for border security. Field visits in Mexico to assess infrastructure and geography. Contact program adviser for more information.

**H SEC 690. Seminar (3)**

Prerequisite: Classified graduate standing.

Intensive study in specific areas of homeland security on themes such as intelligence, domestic and international law and security, GIS and security, sensors and security, privacy and security. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units.

**H SEC 695. Practicum in Homeland Security (3)**

Prerequisite: 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)**

Prerequisite: 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 and Plan B (non-thesis option).

Preparation for the comprehensive examination. For use in conjunction with Plan B (non-thesis option) only. Maximum credit three units of Homeland Security 790, 797, or 798 applicable to a master's degree.

**H SEC 797. Research (1-3) Cr/NC**

Prerequisites: Classified graduate standing and consent of instructor.

Supervised research in an area of homeland security. Maximum credit three units of Homeland Security 790, 797, or 798 applicable to a master's degree.

**H SEC 798. Special Study (1-3) Cr/NC**

Prerequisites: Classified graduate standing and consent of instructor.

Individual study, generally for thesis research. Maximum credit three units of Homeland Security 790, 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**

Prerequisite: Prior registration in Thesis or Project 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 student must be registered in the course when the completed thesis is granted final approval.

**H SEC 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: 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.

**Information and Decision Systems**  
Refer to "Business Administration: Management Information Systems"  
in this section of the bulletin.



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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) English language 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 entering the Interdisciplinary Studies program as the vehicle for the master's degree must be submitted by the deadline set by the university 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 Four 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) (SIMS Code: M.A. 995010; M.S. 995030)**

1. In addition to satisfying the requirements for classified graduate standing and the basic requirements for the master's degree, as described in Part Four 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

Students must take the following steps to obtain classified student status:

1. After meeting with the assistant dean of the Division of Graduate Affairs, a student must 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 assistant 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.

### Courses Acceptable on Master's Degree Program in Interdisciplinary Studies (INT S)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

#### GRADUATE COURSES

##### **INT S 690. Seminar in Research Ethics (1) Cr/NC**

Prerequisite: Graduate standing.

Core content areas that influence responsible conduct of research (RCR) 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. Meets NIH and NSF training grant requirements for RCR instruction.

##### **INT S 691. Research Ethics (2) Cr/NC**

Prerequisite: Graduate standing.

Ethical dimensions of research/scholarship and resolution of ethical dilemmas. Relevant legal, institutional and professional standards and resources addressed. Distance learning and in-class methods. Meets NIH and NSF training grant requirements.

##### **INT S 695. Seminar in Responsible Conduct of Research (RCR) (3)**

Prerequisite: Graduate standing.

Practices central to scientific integrity and responsible conduct of research beyond simple compliance with rules and regulations. Emphasis is 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**

Prerequisite: 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**

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

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

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# 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  
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  
Bey-Ling Sha, Ph.D., Associate 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  
Amy Schmitz Weiss, Ph.D., Assistant Professor of Journalism and  
Media Studies  
Hongmei Shen, 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. Electronic applications must be received by February 1. Materials must be complete and received by 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 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 by February 1.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Journalism and Media Studies by March 1.

### Graduate Admissions

The following materials should be submitted by March 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) English language 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, English language paper scores of 550 (or 213 online) or higher. 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 Four 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

(Major Code: 06010) (SIMS Code: 664141)

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, 529, 550, 560, 574, 581, 585, 589, 591, 596, 602, 603, 620, 696, 701, 708, 710, 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).

## Courses Acceptable on Master's Degree Programs in Journalism and Media Studies (JMS)

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### UPPER DIVISION COURSES

#### JMS 506. Advertising and Society (3)

Prerequisite: 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.

#### JMS 529. Investigative Journalism (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.

History and role of investigative journalism in the U.S. Use of the Internet, public records, spreadsheets, and databases to develop stories in the public interest. Finding patterns and leads in electronic data. Field and laboratory experience.

#### 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. Completion of course with grade of C or better is required for majors and minors.

#### 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.

#### 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. Situation analysis, strategy and objectives. Target audience analysis and selection. Creative development. Media strategy and tactics. Sales promotion. Campaign evaluation. Completion of course with grade of C or better is required for majors and minors.

#### JMS 574. International Advertising (3)

Prerequisite: 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.

#### JMS 581. Public Relations Research Methods (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.

**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 public relations function in strategic management of corporate, governmental, nonprofit, social, and cultural organizations. Completion of course with grade of C or better is required for majors and minors.

**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.

**JMS 591. International Telecommunications (3)**

Prerequisite: 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.

**JMS 595. Seminar in Theoretical Approaches to Public Relations (3)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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.

**JMS 600B. Seminar: Research Methods in Mass Communication and Media Studies (3)**

Prerequisite: 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.

**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.

**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.

**JMS 710. Seminar: Media and Social Influence (3)**

Prerequisites: Journalism and Media Studies 600A and 600B.

Role of media in social influence processes. Media strategies for use in social marketing and political campaigns.

**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.

**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.

**JMS 785. Seminar: Advertising Research (3)**

Prerequisites: Journalism and Media Studies 600A and 600B.

Advanced topics in theory, design, and utilization of advertising research.

**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.

## ***Journalism and Media Studies***

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### **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**

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

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

### **JMS 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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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**

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

## Faculty

Fred W. Kolkhorst, Ph.D., Professor of Exercise and Nutritional Sciences, Director of School  
David Kahan, 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  
Susan S. Levy, 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)  
Simon J. Marshall, Ph.D., Associate Professor of Exercise and Nutritional Sciences  
Denise A. Wiksten, Ph.D., Associate Professor of Exercise and Nutritional Sciences

## Associateships and Assistantships

Graduate teaching associateships are available for a limited number of qualified students. These provide essential education, technical training, and creative experience necessary for future professional and scholarly activity or college-level teaching. Graduate assistantships are also available in some cases to aid faculty research. Application blanks and additional information on graduate programs may be obtained from the School of Exercise and Nutritional Sciences Web site at <http://ens.sdsu.edu>.

## 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 fall semester, only. Submit applications no later than February 1 for the fall semester.

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) English language 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 Four of this bulletin.

### Specific Requirements for the Master of Arts Degree

(Major Code: 08351) (SIMS Code: 666535)

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 Four 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 (SIMS Code: 666581)

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 (SIMS Code: 666542)

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)

### Courses Acceptable on Master's Degree Programs in Kinesiology (ENS)

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

#### UPPER DIVISION COURSES

#### ENS 500. Seminar in Neurophysiological and Mechanical Bases of Therapeutic Exercise (3)

Prerequisites: Exercise and Nutritional Sciences 365, 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)

Prerequisite: Undergraduate statistics course.

Experimental methods in exercise and nutritional science.

#### ENS 602. Research Evaluation in Exercise and Nutritional Sciences (3)

Prerequisite: Exercise and Nutritional Sciences 601.

Techniques in designing, conducting, and reporting research in exercise and nutritional science. Qualitative and quantitative paradigms examined. Ethical consideration of human research.

#### ENS 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 306 and 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 671. Seminar in Advanced Sport and Exercise Psychology (3)**

Prerequisite: Exercise and Nutritional Sciences 461.

Research and theory of psychological behavior in sport and physical activity. Theoretical models, research issues, and applications.

**ENS 684. Behavior Change in Sport and Exercise (3)**

Prerequisite: Exercise and Nutritional Sciences 307.

Principles and applications of operant psychology to the development and maintenance of behavior in physical education and sport environments. Behavioral techniques to manage and motivate learners in diverse physical activity settings.

**ENS 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 601.

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)**

Prerequisite: 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 684, 689, and consent of instructor.

Supervised field work involving assessment and evaluation of psychological and pedagogical variables in sport, physical education, fitness, and health settings. Maximum credit six units, three units applicable to a master's degree.

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

Prerequisite: Consent of department chair.

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

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

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

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

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

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

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

**ENS 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

# 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

Ramona L. Pérez, Ph.D., Associate Professor of Anthropology,  
Chair of Committee and Director of the Center for  
Latin American Studies (Graduate Coordinator)

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

Claudia V. Angelelli, Ph.D., Professor of Spanish

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

Alda Blanco, Ph.D., Professor of Portuguese

David V. Carruthers, Ph.D., Professor of Political Science  
(Undergraduate Adviser)

James B. Gerber, Ph.D., Professor of Economics  
(Graduate Coordinator)

Juan M. Godoy, Ph.D., Professor of Spanish

Lawrence A. Herzog, Ph.D., Professor of Public Affairs

William A. Nericcio, Ph.D., Professor of English and  
Comparative Literature

Norma Ojeda, Ph.D., Professor of Sociology and Chicana and  
Chicano Studies

Gail L. Robinson, Ph.D., Professor of Spanish and Linguistics

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

Gregory A. Talavera, M.D., Professor of Public Health

John R. Weeks, Ph.D., Distinguished Professor of Geography

Fernando Bosco, Ph.D., Associate Professor of Geography

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

Jonathan Graubart, Ph.D., Associate Professor of Political Science

Irene Lara, Ph.D., Associate Professor of Women's Studies

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

Kristen Hill Maher, Ph.D., Associate Professor of Political Science

Enrico A. Marcelli, Ph.D., Associate Professor of Sociology

José Mario Martín-Flores, Ph.D., Associate Professor of Spanish

Doreen J. Mattingly, Ph.D., Associate Professor of Women's Studies

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

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

Thomas P. Passananti, Ph.D., Associate Professor of History,  
Associate Director of the Center for Latin American Studies  
(Graduate Adviser)

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

Kathleen A. Farley, Ph.D., Assistant Professor of Geography

Victoria González-Rivera, Ph.D., Assistant Professor of Chicana and  
Chicano Studies

Peter P. Lindquist, Ph.D., Assistant Professor of Spanish

Katherine Elizabeth Swanson, Ph.D., Assistant Professor of  
Geography

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) English language 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 Administration 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 92182-6038

- (1) Personal statement;
- (2) Three letters of reference from individuals who have known the student's academic performance (one letter may be from an individual who knows the employment performance of the student).

**Master of Public Health Degree and Master of Arts Degree in Latin American Studies**

Applicants seeking admission to the Master of Public Health and Master of Arts degree in Latin American Studies should contact the Graduate School of Public Health requesting appropriate descriptive materials. Detailed application instructions can be obtained from our Web site at <http://publichealth.sdsu.edu>.

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.

**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 Four 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) (SIMS Code: 114301)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Four 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:

	600- and 700-numbered Courses	500-, 600- and 700-numbered Courses
Department A.....	6 units	6 units
Department B.....	3 units	3 units
Department C.....	3 units	3 units
	12 units	12 units

The total program shall include a minimum of 18 units in 600- and 700-numbered courses. Students may select either Plan A or Plan B in consultation with the graduate adviser. In addition to meeting the distribution requirements given above, students electing Plan A must complete the 799A (Thesis) course. Students electing Plan B must pass a comprehensive written and oral examination in lieu of the thesis.

All programs will be approved by the Latin American Studies committee.

**Master of Business Administration 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 Four 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.

## Latin American Studies

Upon advancement to candidacy, the student will enroll in Management 797 (Research) and B A 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) (SIMS Code: 992001)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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):
  - B A 650 Financial Reporting and Analysis I (3)
  - B A 651 Organizational Behavior (3)
  - B A 652 Statistical Analysis (3)
  - B A 653 Managerial Economics (3)
  - B A 655 Marketing (3)
  - B A 662 Operations and Supply Chain Management (3)
  - B A 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

MIS 688	Information Systems in Organizations (3)
MIS 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 America 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 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 Globalization (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

6. In addition, the student must complete MGT 797 (Research) and B A 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 Administration Degree and Master of Arts Degree in Latin American Studies

### General Information

The School of Public Affairs and the Center for Latin American Studies offer a concurrent graduate program leading to a Master of Public Administration and a Master of Arts in Latin American Studies. This concurrent degree program offers students preparation in the fields of public administration and Latin American studies for the purpose of public administration in fields requiring bi-national understanding of administration in the public sector.

If a student in the concurrent graduate program returns to a single degree program, none of the provisions of the concurrent degree program shall pertain. Transfer units will not be accepted towards the concurrent degrees, nor will previous graduate study or prior degrees be accepted toward meeting the unit requirements.

### 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 Four of this bulletin. The successful applicant will also satisfy the requirements for both the Master of Public Administration and the Master of Arts in Latin American Studies. To be admitted to the program, students must have (1) a 3.0 grade point average in the undergraduate major and 2.85 overall and (2) an acceptable score on 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 as described in Part Four of this bulletin.

### Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin and be recommended by the graduate advisers of both programs. In addition, all students must (1) complete Public Administration 600 and three additional courses selected from Public Administration 604, 605 or 606, 630, 642, 650, 660; (2) complete Latin American Studies 600 and 601; (3) achieve a grade point average of 3.0 in these courses with no grade below B-; (4) satisfactorily complete Spanish 201 and 202, or Portuguese 201, or their equivalents, or 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; (5) demonstrate international experience in Latin America through an approved study abroad or an international internship experience, or successful completion of Latin American Studies 550, an approved study abroad experience course.

### Specific Requirements for the MPA/MA Degree

(Major Code: 21020) (SIMS Code: 666905)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete an officially approved course of study consisting of 54-66 units as outlined below.

- Complete the following core of eight courses (24 units):

P A 600	Scope of Public Administration (3)
P A 604	Methods of Analysis in Public and Urban Affairs (3)
P A 630	Seminar in Public Personnel Administration (3)
P A 642	Seminar in Administrative Theory (3)
P A 650	Seminar in Public Financial Management (3)
P A 660	Administration and Public Policy Development (3)
LATAM 600	Seminar in Latin American Studies (3)
LATAM 601	Seminar on Methodology of Latin American Studies (3)

- Complete one of the following courses (3 units):

P A 605	Seminar in Research Methods in Public Administration (3)
P A 606	Seminar in Quantitative Approaches to Public Administration (3)

- Complete three courses in one theme listed below (9 units):

#### City Planning Theme

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)

#### Criminal Justice Administration Theme

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)

#### Public Personnel and Labor Relations Theme

P A 530	Negotiation and Bargaining in the Public Service (3)
P A 531	Governmental Employer-Employee Relations (3)
P A 632	Seminar of Organization Development in the Public Sector (3)
P A 643	Seminar in Administrative Behavior (3) (Offered only at IVC)

### General Public Administration Theme

P A 620	Seminar in Management of Urban Governments (3)
P A 632	Seminar of Organization Development in the Public Sector (3)
P A 640	Seminar in Public Administration (3)
P A 680	Seminar in Transborder Public Administration and Governance (3)
P A 681	Seminar in Comparative Federalism: Mexico and the U.S. (3)
P A 683	Seminar in Environmental Administration and Management in the Transborder Region (3)
P A 684	Seminar in Transnational Criminal Justice: Mexico and the U.S. (3)
P A 685	Practicum in Border Research (3)
P A 686	Seminar in Data Sources and Policy Analysis on the U.S./Mexico Border (3)
P A 687	Seminar in Comparative Urban Planning: Mexico and U.S. (3)

- Complete five courses from at least two departments (15 units):

#### Latin American Studies

LATAM 510	Latin America Research Through Primary Sources (3)
LATAM 540	History, Society, and Ecology of Baja Peninsula (3)
LATAM 550	Mexican-US Border from a Latin American Perspective (3)
LATAM 555	Women's Rights and Citizenship in Latin America (3)
LATAM 560	Latin America after World War II (3)
LATAM 580	Special Topics* (3)
LATAM 700	Current Issues in Latin American Politics (3)
LATAM 797	Research (3) Cr/NC/RP
LATAM 798	Special Study (3) Cr/NC/RP

#### Anthropology

ANTH 520	Ethnographic Field Methods (3)
ANTH 540	Contemporary Cultures of Mesoamerica (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)
ECON 600-level or above;	may include related elective: ECON 561 International trade (3) or ECON 592 International Monetary Theory and Policy (3)

#### History

HIST 550	Colonial Mexico (3)
HIST 551	Modern Mexico (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 522	The Family in Comparative and Cross-Cultural Perspectives (3)
SOC 554	United States-Mexico Transborder Populations and Globalization (3)
SOC 555	Immigrants and Refugees in Contemporary American Society (3)
SOC 740	Seminar in Social Psychology: Sociological Approaches* (3)

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

5. Students must complete P A 799A or LATAM 799A or P A 797 or LATAM 797 (3 units). The thesis (P A 799A or LATAM 799A) must treat a Latin American related topic in public administration and will be supervised by at least one public administration faculty and at least one member of the Latin American studies faculty. A culminating research experience (P A 797 or LATAM 797) must incorporate field research or an internship, and must result in a project that is approved by the graduate advisers in both programs.
6. An internship of 12 units (one semester) beyond the coursework is required of students who have not had equivalent experience. Students should consult with the public administration graduate adviser before enrolling.
7. 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.

## **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 Behavioral Science 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 Four 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) (SIMS Code: 997310)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete an officially approved course of study of not less than 63 units as listed below.

### **General Requirements**

*Total General Units = 39*

<i>Core Courses (15 units)</i>	<i>Prescribed Electives (18 units from at least two departments)</i>		<i>Culminating Experience (6 units)</i>	
P H 601 (3)	ANTH 508 (3)	LATAM 560 (3)	POL S 667 (3)	P H 797 or LATAM 797 (3)
P H 602 (3)	ANTH 520 (3)	LATAM 580 (3)	POL S 696 (3)	P H 799A or LATAM 799A (3)
P H 604 (3)	ANTH 529 (3)	LATAM 696 (3)	SOC 555 (3)	
P H 605 (3)	ANTH 583 (3)	LATAM 700 (3)	SOC 730 (3)	
LATAM 601 (3)	ANTH 603 (3)	LATAM 798 (3)	SOC 740 (3)	
	HIST 551 (3)	POL S 555 (3)	WMNST 512 (3)	
	HIST 640 (3)	POL S 568 (3)	WMNST 565 (3)	
		POL S 655 (3)	WMNST 580 (3)	
		POL S 661 (3)	WMNST 605 (3)	



## Public Health Concentration Requirements

Total Units = 24

(Students must complete one of the following concentrations)

**Epidemiology Concentration  
(SIMS Code: 997311)**

Total Epidemiology Units = 24

*Required Courses (15 units)*

P H 603 (3)  
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 724 (3)  
P H 628 (3) P H 726 (3)  
P H 649 (3) P H 823 (3)  
P H 700A (3) P H 824 (3)  
P H 721 (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 and Behavioral  
Science Concentration  
(SIMS Code: 997312)**Total Health Promotion and Behavioral Science  
Units = 24*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 (6 units)*

P H 664 (3)  
P H 667 (3)  
P H 668 (3)  
P H 700F (3)  
P H 721 (3)  
P H 762 (3)

*Electives (3 units)*

Three units to be selected with the  
approval of the faculty advisory  
committee.

**Environmental Health Concentration  
(SIMS Code: 997313)**

Total Environmental Health Units = 24

*Required Courses (18 units)*

P H 603 (3)  
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 721 (3)  
P H 738 (3)  
P H 798 (1-3)

**Courses Acceptable on Master's Degree  
Programs in Latin American Studies (LATAM)**

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs* sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

**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 525. Race in Mexico: From Conquest to the Revolution (3)  
(Same course as Chicana and Chicano Studies 525)**

Prerequisite: Upper division or graduate standing.

Ways race and racial identities have been constructed in Mexico from early 1500s through 1940. Caste system, ideologies of mestizaje and indigenismo and their impact on revolutionary nationalism.

**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 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)**

Prerequisite: Six upper division units in Latin American content courses.

Interdisciplinary study of selected Latin American topics. Credit will vary depending on the scope and nature of the topic. Whenever appropriate, the course will be taught by a team of instructors representing two or more disciplines. May be repeated with different content. See *Class Schedule* for specific content. Maximum credit eight units.

**Anthropology Courses (ANTH)**

ANTH 508. Medical Anthropology (3)  
ANTH 520. Ethnographic Field Methods (3)  
ANTH 582. Regional Anthropology (3)\*  
ANTH 583. Topical Anthropology (3)\*

**Art Courses (ART)**

ART 561. Mesoamerican Art: Olmecs to Aztecs (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 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)

**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)\*

**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)**

Prerequisite: Graduate standing.  
Theories and methodologies of Latin American Studies.

**LATAM 696. Experimental Topics (3)**

Prerequisite: Graduate standing.  
Intensive study in specific areas of Latin American studies. May be repeated with new content. See *Class Schedule* for specific content. 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**

Prerequisite: 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**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.  
Registration required in any semester or term following assignment of RP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

**Anthropology Courses (ANTH)**

- ANTH 600. Seminar (3)\*
- ANTH 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

\*Acceptable when of relevant content.

**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: A Literary Type (3)\*
- ENGL 626. Comparative Literature (3)\*
- ENGL 696. Special Topics (3)\*
- ENGL 700. Seminar: A Major Author or Authors (3)\*
- ENGL 726. Seminar: Issues in Comparative Literature (3)\*
- ENGL 798. Special Study (1-3) Cr/NC/RP

**Geography Courses (GEOG)**

- GEOG 696. Advanced Special Topics in Geography (3)\*
- GEOG 740. Seminar in Human Geography (3)\*
- GEOG 760. Seminar in Behavioral and Social Geography (3)\*
- GEOG 797. Research (1-3) Cr/NC/RP
- GEOG 798. Special Study (1-3) Cr/NC/RP

**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

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\*Acceptable when of relevant content.

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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: William A. Neruccio, Ph.D.**

**Program Coordinator: David "McHank" McHenry**

## Participating Faculty

Susan E. Cayleff, Ph.D., Professor of Women's Studies  
Patricia J. Geist-Martin, Ph.D., Professor of Communication  
D. Emily Hicks, Ph.D., Professor of English and Comparative Literature and Chicana and Chicano Studies  
Alan E. Kilpatrick, Ph.D., Professor of American Indian Studies  
William A. Neruccio, 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  
Doreen J. Mattingly, Ph.D., Associate Professor of Women's Studies  
Ellen Quandahl, Ph.D., Associate Professor of Rhetoric and Writing Studies  
Shaneshwar Timalisina, Ph.D., Associate Professor of Religious Studies  
Sandra A. Wawrytko, Ph.D., Associate Professor of Philosophy  
Kathy S. Williams, Ph.D., Associate Professor of Biology

## 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), (3) complete a statement of purpose essay, and (4) submit two letters of recommendation.

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) English language 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;
- (2) Two letters of recommendation.

## Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Four 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) (SIMS Code: 114501)

In addition to meeting the basic requirements for the Master of Arts degree in Liberal Arts and Sciences as described in Part Four 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, or MALAS 795 (3) Plan B, Comprehensive Examination.
4. 15 units of electives selected with approval of the MALAS director.

Students may select either Plan A or Plan B in consultation with the MALAS director. In addition to meeting the distribution requirements given above, students electing Plan A must complete MALAS 799A (Thesis or Project). Students electing Plan B must complete MALAS 795 (Studies in the Liberal Arts and Sciences) and pass a written comprehensive examination in lieu of the thesis.

All programs must be approved by the MALAS director in consultation with the Graduate Liberal Arts and Sciences Committee.

## Courses Acceptable on Master's Degree Program in Liberal Arts and Sciences (MALAS)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs* sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### 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)

Prerequisite: 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 795. Studies in Liberal Arts and Sciences (3) Cr/NC

Prerequisite: Graduate standing.

Individual preparation for comprehensive examination for students taking the Master of Liberal Arts and Sciences under Plan B.

#### MALAS 798. Special Study (3) Cr/NC/RP

Prerequisite: 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

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

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

#### MALAS 799C. Comprehensive Examination Extension (0) Cr/NC

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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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

Ghada Osman, Ph.D., Associate Professor of Arabic,  
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)  
Jeffrey P. Kaplan, Ph.D., Professor of Linguistics  
Gail L. Robinson, Ph.D., Professor of Linguistics  
Robert Underhill, Professor of Linguistics, Emeritus  
Eniko Csomay, Ph.D., Associate Professor of Linguistics and  
Associate Dean of the College of Arts and Letters  
Ryu Kitajima, Ph.D., Associate Professor of Japanese  
Robert P. Malouf, Ph.D., Associate Professor of Linguistics  
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  
Gregory D. Keating, 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 introductory linguistics and 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) TESOL/Applied Linguistics, for students intending to teach or design curriculum for ESL/EFL/ELD classrooms (including community college and K-12 levels) or planning to pursue a doctorate in applied linguistics; 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.

**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.

**Gregory D. Keating** – Second language acquisition, psycholinguistics (eye-tracking research), sentence processing, Spanish linguistics.

**Ryu Kitajima** – Second language acquisition, language assessment, teaching methodologies and language pedagogy.

**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.

**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) English language 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 English language 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 (CSUMentor on-line application is February 1. In order to ensure consideration, other application materials must be sent to the Office of Graduate Admissions (transcripts and test scores) and to the department (statement of purpose and recommendation letters) by March 1.

For any updates about graduate admission and information about spring semester admission, go to the department Web site at [http://www-rohan.sdsu.edu/dept/linguist/graduate\\_information/admissions.htm](http://www-rohan.sdsu.edu/dept/linguist/graduate_information/admissions.htm). 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 Four 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) (SIMS Code: 114701; TESOL Applied 114705; Computational Linguistics 114706)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Four of this bulletin, the student must complete a graduate program of at least 30 units of 500-, 600-, and 700-level courses to include Linguistics 502, 503, and 795 (a prerequisite to Linguistics 502 and 503 is completion of Linguistics 501 or equivalent). A minimum of 15 of the units taken must be from 600- or 700-level courses.

Students selecting the General Linguistics specialization must complete either Linguistics 621 or Linguistics 622, and six units from the following: Linguistics 610, 620, 640, 654, 660, 696 (with general linguistics content).

Students selecting the TESOL/Applied (ESL/Applied) specialization must complete 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, Linguistics 582, and six units selected from Linguistics 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; Computer Science 550, 560, 562, 596 (when offered with computational linguistics content), 620, 696 (when offered with computational linguistics content), Rhetoric and Writing Studies 602; Spanish 561, 770; Speech, Language, and Hearing Sciences 790, 793.

In addition, with approval of the graduate adviser, a student must choose either a thesis (Plan A), or a written comprehensive examination (Plan B). 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 at the time of filing an official program of study.

### Advanced Certificate in Teaching English as a Second or Foreign Language (TESL/TEFL)

**(Major Code: 90035) (SIMS Code: 114786)**

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, 654, and 795. Students must obtain a 3.0 GPA overall in the courses for the advanced certificate. The prerequisite to the Advanced Certificate is the Basic Certificate or its equivalent. A student's entire program comprising Basic and Advanced Certificates must include at least one course from Linguistics 530, 622, and 623. Under certain circumstances comparable courses taken at other institutions may count toward the certificate. Such courses must be evaluated and approved by the certificate adviser. For information on the Basic Certificate, please see the *General Catalog*.

### Courses Acceptable on Master's Degree Programs in Linguistics (LING)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs* sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

#### UPPER DIVISION COURSES

##### LING 501. Fundamentals of Linguistics (3)

Prerequisite: Upper division standing.

Principles of modern linguistics, with attention to English phonetics, phonology, morphology, syntax, semantics and pragmatics; universals and typology. (Formerly numbered Linguistics 520.)

##### LING 502. Language in Mind and Society (3)

Prerequisite: Linguistics 501. **Proof of completion of prerequisite required:** Copy of transcript.

Child language acquisition, adult language production/comprehension and sociolinguistics. Dialects, language variation, and standardization. Bilingualism and language change.

##### LING 503. Functions of Language (3)

Prerequisite: Linguistics 501. **Proof of completion of prerequisite required:** Copy of transcript.

Empirical methods in linguistics. Phonological structure of English and other languages. Functional and discourse related approaches to language patterns. Connections between morphosyntactic concepts and functional/discourse concepts to conduct text analysis.

### LING 505. Writing for Graduate Students (3)

Prerequisite: 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 521. Phonology (3)

Prerequisite: Linguistics 420 or 501.

Theoretical principles of transformational-generative phonology.

### LING 522. Syntax (3)

Prerequisite: Linguistics 420 or 501.

Theoretical principles of transformational-generative syntax.

### LING 523. Morphology (3)

Prerequisite: Linguistics 420 or 501.

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)

Prerequisite: Upper division standing.

Development of American English. Regional, social, and ethnic differences in pronunciation, grammar, and vocabulary. Differences in men's and women's language. Black English.

### LING 525. Semantics and Pragmatics (3)

Prerequisite: Linguistics 420 or 501.

Advanced semantic theory; systematic analysis of the interaction of sequences of language with real world context in which they are used.

### LING 530. English Grammar (3)

Prerequisite: Six upper division units in linguistics.

English morphology, syntax, and discourse structure, including simple and complex sentence structure; lexical categories and sub-categories; discourse functions of selected constructions. Problems and solutions in teaching English grammar.

### LING 550. Theory and Practice of English as a Second Language (3)

Prerequisite: Linguistics 420 or 501.

The nature of language learning; evaluation of techniques and materials for the teaching of English as a second language.

### LING 551. Sociolinguistics (3)

Prerequisite: A course in introductory linguistics.

Investigation of the correlation of social structure and linguistic behavior.

### LING 552. Psycholinguistics (3)

Prerequisite: Linguistics 420 or 501.

Psychological and mental processes related to comprehension, production, perception, and acquisition of language in adults and children.

### LING 554. Child Language Acquisition (3)

Prerequisite: Linguistics 420 or 501.

Theories and research methods in child language acquisition; quantitative and qualitative analyses of data at various levels of grammar (phonology, morphology, lexicon, syntax, and discourse) using language and acquisition corpora.

### LING 555. Practical Issues in Teaching English as a Second Language (3)

Prerequisite: 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)

Prerequisite: 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)

Prerequisite: 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)

Prerequisite: Two linguistics courses.

Practical introduction to computation with text corpora and introduction to Python. Tokenizing, part-of-speech tagging, and lemmatizing (stemming) large corpora. Writing of Python programs required.

### LING 581. Computational Linguistics (3)

(Same course as Computer Science 581)

Prerequisites: Linguistics 570 or Mathematics 245; Linguistics 571 or Computer Science 320.

Basic concepts in computational linguistics including regular expressions, finite-state automata, finite-state transducers, weighted finite-state automata, and n-gram language models. Applications to phonology, orthography, morphology, syntax. Probabilistic models. Statistical techniques for speech recognition.

### LING 582. Computational Syntax and Semantics (3)

Prerequisites: Linguistics 522 and 581.

Review of finite-state and context free languages; unification grammars; problems of meaning and intention in computational systems. Example applications from information retrieval, dialogue, and machine translation systems.

### LING 596. Selected Topics in Linguistics (1-3)

Prerequisite: Upper division standing.

Advanced study of selected topics. May be repeated with new content. 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)

Prerequisite: Three upper division units in linguistics, preferably Linguistics 410, 501, or 521.

Methods and principles used in historical study of language; processes of language change in phonology, syntax, and semantics; linguistics reconstruction; origin of language; language families; development of writing. Analysis of Indo-European, Old English, or Middle English. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units.

### LING 620. Advanced Formal Syntax (3)

Prerequisite: Linguistics 522.

Advanced study of formal syntactic theory.

### LING 621. Advanced English Phonology (3)

Prerequisite: Linguistics 521.

English phonetics, phonemics, and phonological rules. Phonological differences among American English dialects. Survey of contemporary approaches to phonology.

### LING 622. Discourse and Syntax (3)

Prerequisite: Linguistics 503, 522, or 530.

Functional and discourse-oriented approaches to syntax and syntactic approaches to discourse.

### LING 623. Immigrant Languages (3)

Prerequisite: Linguistics 420 or 501.

Contrastive structure of selected languages representing significant immigrant populations in San Diego; emphasis on phonological, orthographic, morphological, lexical and syntactic features.

### LING 640. Field Methods in Linguistics (3)

Prerequisites: Linguistics 521 and credit or concurrent registration in Linguistics 622.

Principles and techniques of linguistic analysis working directly with native informants, including phonemic, grammatical, and syntactic analysis and text collection and interpretation.



**LING 650. Materials Development in Applied Linguistics (3)**

Prerequisite: Linguistics 550.

Materials development and adaptation for teaching English as a second language and foreign language.

**LING 652. Second Language Acquisition (3)**

Prerequisites: Linguistics 452, 552 or 554; and 550.

Analyses of theories of second language acquisition; theoretical and empirical bases of current second language teaching methodologies.

**LING 653. ESL Reading and Writing (3)**

Prerequisite: Linguistics 550.

Application of discourse and reading theory to the teaching and testing of ESL reading and writing. Issues of coherence, process-product, genre studies.

**LING 654. Language and Cognition (3)**

Prerequisite: Linguistics 552.

Language production, comprehension, and acquisition, as these relate to human cognition.

**LING 655. English for Specific Purposes and Content-Based Instruction (3)**

Prerequisites: Linguistics 420, 501, and 550.

Theory, practice, and history of these two related approaches to ESL/EFL.

**LING 656. Quantitative Research Methods in Language Studies (3)**

Prerequisite: Linguistics 420 or 501.

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)**

Prerequisite: Two courses in linguistics or equivalent background.

Background and development of modern linguistic theory.

**LING 681. Statistical Methods in Computational Linguistics (3)**

Prerequisite: Linguistics 581.

Statistical methods for computational linguistics. Markov chains, hidden Markov models, statistical estimators for n-gram models, finding collocation and subcategorization frames, collecting selectional preferences, part-of-speech tagging, word sense disambiguation, probabilistic context-free grammars.

**LING 696. Advanced Topics in Linguistics (1-3)**

Prerequisite: Consent of instructor.

Advanced study in specific areas of linguistics. May be repeated with new content. See *Class Schedule* for specific content. 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**

Prerequisite: Linguistics 550.

Internship in teaching English as a second language and English as a foreign language, offering work experience with practicing professionals.

**LING 795. Seminar in Linguistics (3)**

Prerequisite: Completion of three units of 600- and 700-numbered courses in the master's program for linguistics.

Research in linguistics, course content varying according to instructor. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.**LING 798. Special Study (1-3) Cr/NC/RP**

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

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

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

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

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

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

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

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

**LING 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

**Management, Management Information Systems, & Marketing**

Refer to "Business Administration" in this section of the bulletin.

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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  
Ricardo Carretero, Ph.D., Professor of Mathematics  
(M.S. Dynamical Systems Graduate Adviser)  
José E. Castillo, Ph.D., Professor of Mathematics  
(M.S. Computational Science Graduate Adviser)  
T. Marc Dunster, Ph.D., Professor of Mathematics (Coordinator)  
Tunc Geveci, Ph.D., Professor of Mathematics  
Stefen Hui, Ph.D., Professor of Mathematics  
(M.S. Communication Systems Graduate Adviser)  
F. David Lesley, Ph.D., Professor of Mathematics, Emeritus  
Joseph M. Mahaffy, Ph.D., Professor of Mathematics  
Antonio Palacios, 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  
J. Carmelo Interlando, Ph.D., Associate Professor of Mathematics  
Stephen J. Kirschvink, Ph.D., Associate Professor of Mathematics  
Michael O'Sullivan, Ph.D., Associate Professor of Mathematics  
Vadim Ponomarenko, Ph.D., Associate Professor of Mathematics  
(M.A. Mathematics Graduate Adviser)  
Roxana N. Smarandache, Ph.D., Associate Professor of Mathematics

### Mathematics Education

Joanne Lobato, Ph.D., Professor of Mathematics  
B. Ricardo Nemirovsky, Ph.D., Professor of Mathematics  
Chris L. Rasmussen, Ph.D., Professor of Mathematics  
Janet S. Bowers, Ph.D., Associate Professor of Mathematics  
(M.A.T.S. Graduate Adviser)  
Susan D. Nickerson, Ph.D., Associate Professor of Mathematics

## 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 climate mathematics, computational mathematics, control theory, dynamical systems, financial mathematics, mathematics of communication, mathematical physics, modeling and optimization within applied mathematics.

Opportunities for research in mathematics education are available through research facilities in the Center for Research in Mathematics and Science Education.

The department hires qualified graduate students as teaching associates. These positions serve as an important stepping stone on the path to a career in the teaching of mathematics at various levels.

## 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) English language 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 Four 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) (SIMS Code: 776301)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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) (SIMS Code: 776314)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree described in Part Four 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 (Major Code: 17031) (SIMS Code: 776316)

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 635, 639, 696, Special Topics in Dynamical Systems (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. For additional information, visit <http://nlids.sdsu.edu/masters/>.

### Concentration in Mathematical Theory of Communication Systems (Major Code: 17031) (SIMS Code: 776317)

This concentration focuses on the area of mathematics relevant to the transmitting and processing of information by digital or analog methods. In addition to meeting the requirements for classified standing in the Master of Science program in applied mathematics, students pursuing this concentration should also have completed Mathematics 521A or its equivalent before entering the program. Students must complete Mathematics 525, 626, 668; two courses selected from Mathematics 528, 625 or 667, and two courses selected from Mathematics 623, 627A, 627B, 630A-630B, 631A-631B. Two additional courses in mathematics or in a related area may be selected with the approval of the program adviser. Either Mathematics 797 (Research) or 799A (Thesis) are required of students in this degree program.

## Communications Systems Certificate

The Communication Systems Certificate provides mathematicians and engineers with the specialized training in the areas of coding, cryptography, and signal processing relevant for the understanding of modern communication systems. This certificate is designed for individuals who need the knowledge this certificate program provides to participate in projects in the area of communication systems and signal processing.

This is an advanced academic certificate at the postbaccalaureate level. The admission requirement is a bachelor's degree in mathematics, engineering, or a closely related field. Individuals with knowledge of the background materials through work or self-study may also be accepted into this program at the discretion of the program director.

Course requirements for the certificate program are the following courses completed with a grade point average of 3.0 or above: Mathematics 522, 525, 626, 667, and 668.

For information on the application process, contact the Department of Mathematics and Statistics or call 619-594-6191.

## Courses Acceptable on Master's Degree Programs in Applied Mathematics, Mathematics, and Statistics (MATH)

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### UPPER DIVISION COURSES

**NOTE: Proof of completion of prerequisites required for all upper division courses: Copy of transcript.**

#### MATH 509. Computers in Teaching Mathematics (3)

Two lectures and three hours of laboratory.

Prerequisite: Mathematics 252.

Solving mathematical tasks using an appropriate computer interface, and problem-based curricula. Intended for those interested in mathematics teaching.

#### MATH 510. Introduction to the Foundations of Geometry (3)

Prerequisite: Mathematics 122 or 151.

The foundations of Euclidean and hyperbolic geometries. Highly recommended for all prospective teachers of high school 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)

Prerequisite: Mathematics 521A.

Continuation of Mathematics 521A. Rings, ideals, quotient rings, unique factorization, noncommutative rings, fields, quotient fields, and algebraic extensions.

#### MATH 522. Number Theory (3)

Prerequisite: Mathematics 245.

Theory of numbers to include congruences, Diophantine equations, and a study of prime numbers; cryptography.

#### MATH 523. Mathematical Logic (3)

Prerequisite: Mathematics 245.

Propositional logic and predicate calculus. Rules of proof and models. Completeness and the undecidability of arithmetic. Not open to students with credit in Philosophy 521.

#### MATH 524. Linear Algebra (3)

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)

Prerequisite: Mathematics 254.

Linear codes, perfect and related codes, cyclic linear codes, BCH codes, burst error-correcting codes.

**MATH 528. Information Theory and Data Compression (3)**

Prerequisites: Mathematics 245 and 254.

Fundamental of discrete probability and information theory: joint and conditional distributions, Bayes' theorem, entropy, channel capacity, Noiseless coding theorem and data compression algorithms: Huffman codes, arithmetic coding, Ziv-Lempel codes. Information theory in error correction coding and cryptography.

**MATH 531. Partial Differential Equations (3)**

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)**

Prerequisite: Mathematics 252.

Analytic functions, Cauchy-Riemann equations, theorem of Cauchy, Laurent series, calculus of residues, and applications.

**MATH 533. Vector Calculus (3)**

Prerequisite: Mathematics 254 or 342A.

Scalar and vector fields; gradient, divergence, curl, line and surface integrals: Green's, Stokes' and divergence theorems. Green's identities. Applications to potential theory or fluid mechanics or electromagnetism.

**MATH 534A. Advanced Calculus I (3)**

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)**

Prerequisite: Mathematics 534A.

Series and sequences of functions and their applications, functions of several variables and their continuity, differentiability and integrability properties.

**MATH 537. Ordinary Differential Equations (3)**

Prerequisite: Mathematics 337.

Theory of ordinary differential equations: existence and uniqueness, dependence on initial conditions and parameters, linear systems, stability and asymptotic behavior, plane autonomous systems, series solutions at regular singular points.

**MATH 538. Discrete Dynamical Systems and Chaos (3)**

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)**

Prerequisite: Mathematics 254 or 342A. Recommended: Computer Science 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)**

Prerequisite: Mathematics 541.

Gaussian elimination, LU factorizations and pivoting strategies. Direct and iterative methods for linear systems. Iterative methods for diagonalization and eigensystem computation. Tridiagonal, Hessenberg, and Householder matrices. The QR algorithm.

**MATH 544. Computational Finance (3)**

Prerequisite: Statistics 550 or 551A.

Risk evaluation. Numerical procedures for evaluating financial derivatives. Monte Carlo simulation techniques.

**MATH 561. Applied Graph Theory (3)**

Prerequisite: Mathematics 245 or 254.

Undirected and directed graphs, trees, Hamiltonian circuits, classical problems of graph theory including applications to linear systems.

**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)**

Prerequisite: Mathematics 245.

Permutations, combinations, generating functions, recurrence relations, inclusion-exclusion counting. Polya's theory of counting, other topics and applications.

**MATH 580. Risk Management: Stocks and Derivative Securities (3)**

Prerequisite: Statistics 550 or 551A.

Theory of derivative securities with focus on evolution of stock prices and pricing of options.

**MATH 581. Risk Management: Portfolio Selection and Other Features of Finance Markets (3)**

Prerequisite: 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)**

Prerequisite: Consent of instructor.

Selected topics in classical and modern mathematical sciences. May be repeated with the approval of the instructor. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. 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)**

Prerequisite: Mathematics 524.

Characteristic and minimal polynomials, Cayley-Hamilton theorem, canonical forms, hermitian matrices, Sylvester's law, norms, singular values, stability, non-negative matrices.

**MATH 625. Algebraic Coding Theory (3)**

Prerequisites: Mathematics 525 and Mathematics 521B or 522.

Algebraic theory of error correction codes and decoding algorithms used in modern communications systems. Reed-Solomon codes and algebraic decoding algorithms. Code duality, MacWilliams' identities and the linear programming bound. Probabilistic decoding of convolutional codes, low-density parity-check codes and turbo codes.

**MATH 626. Cryptography (3)**

Prerequisites: Mathematics 521A and 522.

Design of secure cryptosystems with applications. Classical and public key cryptosystems. Primality testing, factoring, discrete log problem, and knapsack problem.

**MATH 627A. Modern Algebra I (3)**

Prerequisite: Mathematics 521B.

Group theory, including isomorphism theorems, permutation groups, and simplicity of  $A_n$ , finite abelian groups, and Sylow theorems. Rings, ideals, principal ideal domains, and unique factorization.

**MATH 627B. Modern Algebra II (3)**

Prerequisite: Mathematics 627A.

Modules and the Wedderburn-Artin theorem, field extensions, splitting fields, Galois theory, finite fields, the fundamental theorem of algebra.

**MATH 630A-630B. Functions of a Real Variable (3-3)**

Prerequisites: Mathematics 524 and 534B. Mathematics 630A is prerequisite to Mathematics 630B.

Lebesgue measure and integration, metric spaces, Banach spaces, Hilbert spaces, spectral theory.

**MATH 631A-631B. Functions of a Complex Variable (3-3)**

Prerequisites: Mathematics 532 and 534B. Mathematics 631A is prerequisite to 631B.

Theory of analytic functions. Elementary functions and power series, Cauchy's theorem and its consequences. Entire functions, conformal mappings, Riemann mapping theorem. Harmonic functions.

**MATH 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: Consent of instructor.

An intensive study in advanced mathematics. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

**MATH 790. Practicum in Teaching of Mathematics (1) Cr/NC**

Prerequisite: Award of graduate teaching associateship in mathematics.

Supervision in teaching mathematics. Lecture writing, style of lecture presentation and alternatives, test and syllabus construction, and grading system. Not applicable to an advanced degree. Required for first semester GTA's.

**MATH 797. Research (1-3) Cr/NC/RP**

Prerequisite: Six units of graduate level mathematics.

Research in one of the fields of mathematics. Maximum credit six units applicable to a master's degree.

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

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

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

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

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

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

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

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

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

**MATH 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. 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

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., #236  
619-594-4696  
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., 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  
Cheryl L. Mason, Ph.D., Professor of Teacher Education  
B. Ricardo Nemirovsky, Ph.D., Professor of Mathematics  
Walter C. Oechel, Ph.D., Distinguished Professor of Biology  
Randolph A. Philipp, Ph.D., Professor of Teacher Education  
Chris L. Rasmussen, Ph.D., Professor of Mathematics  
Stephen K. Reed, Ph.D., Professor of Psychology  
Alberto J. Rodriguez, Ph.D., Professor of Policy Studies in Language  
and Cross-Cultural Education  
Janet S. Bowers, Ph.D., Associate Professor of Mathematics  
(M.A.T.S. Graduate Adviser)  
Alexander W. Chizhik, Ph.D., Associate Professor of Teacher  
Education (Ph.D. Graduate Adviser)  
Victoria R. Jacobs, Ph.D., Associate Professor of Teacher Education  
Lisa L. Clement Lamb, Ph.D., Associate Professor of Teacher  
Education  
Susan D. Nickerson, Ph.D., Associate Professor of Mathematics  
Donna Ross, Ph.D., Associate Professor of Teacher Education  
Kathy S. Williams, Ph.D., Associate Professor of Biology  
Rafaela M. Santa Cruz, Ph.D., Associate Professor of Teacher  
Education  
Sara Unsworth, Ph.D., Assistant Professor of Psychology  
Jessica Pierson, Ph.D., Assistant Professor of Teacher Education  
Meredith Houle, Ph.D., Assistant Professor of Teacher Education

## Committee for Mathematics Education

Nadine S. Bezuk, Ph.D., Professor of Teacher Education  
Joanne Lobato, Ph.D., Professor of Mathematics  
B. Ricardo Nemirovsky, Ph.D., Professor of Mathematics  
Randolph A. Philipp, Ph.D., Professor of Teacher Education  
Chris L. Rasmussen, Ph.D., Professor of Mathematics  
Janet S. Bowers, Ph.D., Associate Professor of Mathematics  
Victoria R. Jacobs, Ph.D., Associate Professor of Teacher Education  
Lisa L. Clement Lamb, Ph.D., Associate Professor of Teacher  
Education  
Susan D. Nickerson, Ph.D., Associate Professor of Mathematics  
Rafaela Santa Cruz, Ph.D., Associate Professor of Teacher Education  
Jessica L. Pierson, Ph.D., Assistant Professor of Teacher Education

## Section I. Master's Degree Programs

### 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 Four 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) (SIMS Code: 776305)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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 (SIMS Code: 776320).** 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 (SIMS Code: 776351).** 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.

## Master of Arts Degree in Education

### Concentration in 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 Educational Web 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)

## 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: Randolph A. Philipp  
 Staff Adviser: Deb Escamilla  
 Doctoral Program Members: Bezuk, Bowers, Chizhik, Fisher, Goldberg, Houle, Jacobs, Lamb, Lobato, Mason, Nemirovsky, Nickerson, Oechel, Philipp, Pierson, Rasmussen, Reed, Rodriguez, Ross, Unsworth, Santa Cruz, Williams

#### University of California, San Diego:

Coordinators: Jeff Rabin and Gabriele Wienhausen  
 Graduate Adviser: Jeff Rabin  
 Staff Adviser: Sherry Seethaler  
 Doctoral Program Members: Alac, Appelbaum, Barner, Brydges, Cole, Czworkowski, Datnow, Halter, Heyman, Levin, Magde, Núñez, Rabin, Rimmel, Sawrey, Simon, Weizman, 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) English language 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/mсед/crmse\\_app02.doc](http://www.sci.sdsu.edu/CRMSE/mсед/crmse_app02.doc));
- (2) Mathematics and Science Education recommendation form as cover sheet  
([http://www.sci.sdsu.edu/CRMSE/mсед/Recommend\\_Form-CoS.doc](http://www.sci.sdsu.edu/CRMSE/mсед/Recommend_Form-CoS.doc));
- (3) At least three letters of recommendation.

### Specific Requirements for the Doctor of Philosophy Degree

(Major Code: 08997) (SIMS Code: 993501)

**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: EDS 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/EDS 117, *or* SocC 126/EDS 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 collegiate 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 Programs**

**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.

### Algebra Specialist Certificate

(Offered through the College of Extended Studies)

The algebra specialist certificate program enhances the ability of credentialed middle school teachers to prepare students to succeed in algebra I and improve student achievement in algebra I. Persons earning the certificate will develop special expertise in the teaching of mathematics in middle schools. For application or further information, contact the program advisers.

Prerequisites for admission include the following:

1. Teaching credential.
2. Two years of classroom teaching experience.
3. Two letters of recommendation.

Required courses (16 units):

MATH 506A	Algebra in the Middle Grades I (3)
MATH 506B	Algebra in the Middle Grades II (3)
MATH 507A	Functions and Study of Change I (2)
MATH 507B	Functions and Study of Change II (3)
MTHED 575	Developing Algebraic Understanding in Middle Grades (Part I) (2)
MTHED 576	Developing Algebraic Understanding in Middle Grades (Part II) (3)

Students must receive a C (2.0) in all certificate courses taken for a letter grade. With consent of the adviser, six units of mathematics education coursework with a grade of B (3.0) or better may be applied toward a master's degree in education.

### Courses Acceptable on Master's Degree Program in Mathematics Education (MTHED)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs* sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

#### UPPER DIVISION COURSES

#### MTHED 571. Children's Mathematics Understanding in Primary Grades (Part I) (1-3)

Prerequisite: 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)

Prerequisite: 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)

Prerequisite: 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)

Prerequisite: 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.

#### MTHED 575. Developing Algebraic Understanding in Middle Grades (Part I) (1-3)

Prerequisite: Admission to algebra specialist certificate program.

Ongoing assessment and instructional decision-making to increase children's achievement and understanding of rational number concepts in middle grades, laying foundation for understanding algebra. Maximum credit three units.

#### MTHED 576. Developing Algebraic Understanding in Middle Grades (Part II) (1-3)

Prerequisite: Admission to algebra specialist certificate program.

Ongoing assessment and instructional decision-making to increase children's achievement and understanding of proportional reasoning, patterns, and functions in middle grades, laying foundation for understanding algebra. Maximum credit three units.

### Courses Acceptable on Master's and Doctoral Degree Programs in Mathematics and Science Education (MTHED) (MSE)

#### Mathematics and Science Education (MTHED) 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)

Prerequisite: 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)

Prerequisite: 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)

Prerequisite: Consent of instructor or graduate adviser.

Curricular change in algebra, with attention to experimental curricula, to research on learning of algebra, and to influences of technology. Implications for instruction.

#### MTHED 606. Selected Topics in 7-14 Mathematics Curriculum (3)

Prerequisite: Consent of instructor or graduate adviser.

Curricular change in school mathematics, to include geometry, probability, and statistics, with attention to contemporary curricula, to research on learning and teaching in those areas, and to the influences of technology. Implications for instruction.

#### MTHED 607. Seminar on Research in Undergraduate Mathematics Education (3)

Prerequisite: Consent of instructor or graduate adviser.

Research in undergraduate mathematics education and its implications for teaching. Topics include research on student thinking on concepts from calculus through abstract algebra and the teaching and learning of proof.

**Mathematics and Science Education (MSE)  
DOCTORAL 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. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit four units applicable to an advanced degree.

**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)**

Prerequisites: Admission to doctoral program in Mathematics and Science Education; Psychology 670A, and consent of instructor.

Issues such as analysis of protocols, problems of measurement in evaluation of learning, development, and assessment of cognitive models in learning in mathematics and science.

**MSE 820. Research Project (3-6) Cr/NC/RP**

Prerequisite: Admission to doctoral program in Mathematics and Science Education.

Participation in an ongoing research project and development of a related study.

**MSE 830. Research Seminar (3)**

Prerequisite: Successful completion of qualifying examination.

Students and faculty present ongoing research for discussion and critique.

**MSE 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisite: Mathematics and Science Education 820.

Independent investigation in general field of the dissertation.

**MSE 898. Doctoral Special Study (1-8) Cr/NC/RP**

Prerequisites: 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**

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.

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

**Courses for Mathematics and Algebra Specialist Certificate Programs and Mathematics Education (MATH)**

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

**UPPER DIVISION COURSES**

**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.

**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.

**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.

**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.

**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.

**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.

## Mathematics and Science Education

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### **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.

### **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.

### **MATH 505A. Reasoning: Probability (1)**

Prerequisites: Teaching credential and consent of instructor.

Probabilistic situations, theoretical probabilities, and expected values.

### **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.

### **MATH 506A. Algebra in the Middle Grades I (3)**

Prerequisites: Teaching credential and consent of instructor.

Mathematical foundations that underlie concepts and procedures emphasized in algebra I and algebra II as taught at middle and high school level, to include focus on real number system, ratios, proportional reasoning, equality, number theory, and proof.

### **MATH 506B. Algebra in the Middle Grades II (3)**

Prerequisites: Mathematics 506A, practicing teachers with valid teaching credential, and consent of instructor.

Mathematical foundations that underlie concepts and procedures emphasized in algebra I and algebra II as taught at middle and high school level, to include focus on functions in context of relations, patterns, and graphing.

### **MATH 507A. Functions and Study of Change I (2)**

Prerequisites: Mathematics 506B, practicing teachers with valid teaching credential, and consent of instructor.

Mathematical ideas surrounding linear functions and change to include proportionality, slope, and graphing. Arithmetic and geometric sequences.

### **MATH 507B. Functions and Study of Change II (3)**

Prerequisites: Mathematics 507A, practicing teachers with valid teaching credential, and consent of instructor.

Mathematical ideas surrounding nonlinear functions and variable rates of change to include quadratic and exponential situations.

## 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.

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**Mechanical Engineering:** Refer to “Engineering” in this section of the bulletin.  
**Molecular Biology:** Refer to “Biology” in this section of the bulletin.

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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  
Brenton P. Dutton, M.M., Professor of Music  
Karen J. Follingstad, D.M.A., Professor of Music  
Richard A. Helzer, M.F.A., Professor of Music  
Jane M. Kolar, Ph.D., Professor of Music (Graduate Adviser)  
Marian Liebowitz, D.M.A., Professor of Music  
Joseph Waters, Ph.D., Professor of Music  
Bill Yeager, M.M., Professor of Music  
Kevin M. Delgado, Ph.D., Associate Professor of Music  
Todd Rewoldt, D.M.A., Associate Professor of Music  
Richard Thompson, M.M., Associate Professor of Music  
Matthew Rowe, M.M., Assistant Professor of Music  
Eric S. Smigel, Ph.D., Assistant Professor of Music

### Applied Music Instruction

**Bassoon:** Martchev, V.  
**Cello:** Zhao  
**Clarinet:** Renk  
**Classical Guitar:** Benedetti, Romero, Wetzel  
**Composition:** Dutton, Waters  
**Double Bass:** Kurtz, Magnusson  
**Euphonium:** Dutton  
**Flute:** Martchev, P.  
**Harp:** Mashkovtseva  
**Horn:** Kitelinger  
**Jazz Guitar:** Boss  
**Jazz Studies:** Helzer, Thompson, Yeager  
**Non-Western Instruments:** Specialists from specific cultures as available each semester  
**Oboe:** Conaty  
**Opera:** Evans-O'Connor  
**Percussion:** Cohen, Holguin  
**Piano:** Follingstad, Kolar  
**Saxophone:** Rewoldt, Rekevics  
**Trombone:** Covington, Pollack  
**Trumpet:** Cannon, Wilds  
**Tuba:** Dutton  
**Viola:** Chen, Maril  
**Violin:** Guideri  
**Voice:** Chi, MacKenzie, Nikkel, Toral, Tweed

### Dance

Joseph W. Alter, M.F.A., Associate Professor of Dance  
Leslie Seiters, M.F.A., Associate 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 in 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 or theory. Master of Music students may specialize in performance, composition, jazz or conducting.

Graduate students are prepared for careers that encompass scholarly research, teaching, performing, or creating new works.

**Composition:** Individual composition studies integrated with an awareness of global music practices.

**Conducting:** Literature and score analysis, hand techniques, rehearsal techniques, general preparation and performance in both the choral and instrumental areas.

**Ethnomusicology:** Study of global music with emphasis on cultural context, representation, ethnography, fieldwork, and performance.

**Jazz Studies:** Education, research, performance, and composition in all styles of jazz.

**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:** Preparation of the teacher of the child, adolescent, or adult students.

**Theory:** Comprehension of and facility with historical analytic techniques.

The 78,000 square-foot music building, completed in 1970, includes a 300-seat recital hall, rehearsal rooms for instrumental and choral organizations, an electronic music studio, two 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 a 24-station student computer laboratory that provides facilities for computer assisted instruction in music theory and ear training, programs for graphics and composing music, MIDI, and notation software.

The electronic music composition studio 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.

### Statement on Computers

Students must become competent in the operation of personal computers to include word processing software, presentation software, web-based applications, and music notation software. Students, especially those planning to pursue the composition or electro-acoustic composition track, are encouraged to own a Macintosh laptop computer capable of running sophisticated music notation/composition software. For additional information regarding suggested platform and software information, contact the School of Music and Dance.

### 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 English language score of 550. Foreign applicants taking the computer-based English language test must achieve a minimum score of 213 or 80 or higher using the Internet version.

After taking placement examinations in Western music history, Western music theory, aural skills, and performance (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.

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) English language or the computer-based English language score for foreign students, if 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:

Director of Graduate Studies  
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.
- (3) M.A. applicants: Refer to special requirements for Admission to Master of Arts Degree in Music in next column.

### Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Four of this bulletin, and must have removed any deficiencies identified in the qualifying (placement) examinations by the end of the first semester.

### Admission to Master of Arts Degree in Music

In addition to the general admission requirements, special admission requirements for the M.A. in ethnomusicology, if student has an undergraduate music degree, include: (a) submit a research paper; (b) prepare an audition on an instrument or voice in western or non-western music; (c) complete an interview; and (d) complete the qualifying (placement) examination in music history. If a potential graduate student in ethnomusicology has an undergraduate degree in anthropology or related humanistic discipline, the student must complete the equivalent of Music 205A and 205B, in addition to the requirements listed above.

Special admission requirements for the M.A. in musicology include: (a) the one-page statement of personal goals must describe how the student has been involved in music, why the student is interested in pursuing a graduate degree in musicology, and what research topics interest the student; (b) the two letters of reference should be from individuals who are in a position to comment on the student's potential to succeed in graduate work; (c) a 10 to 12-page paper on any topic of music history that reflects exceptional skills in critical thinking, to include references to appropriate literature, and demonstrates competence in spelling, grammar, organization, and citation format; and (d) interview.

In addition to the admission requirements for the School of Music, a student seeking the M.A. in piano pedagogy must: (a) submit an undergraduate research paper or research article on a pedagogical topic with references; (b) submit a DVD of recent piano teaching; and (c) complete an interview.

### Specific Requirements for the Master of Arts Degree

(Major Code: 10051) (SIMS Code: 665302)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete a 30-unit graduate program of which at least 18 units must be in 600- and 700-numbered courses and which includes the following core: Music 612 or 613; 652, 653 or 654, and 690.

Students may choose either Plan A or Plan B. Students in Plan A are required to enroll in Music 799A, Thesis or Project, and to pass a final oral comprehensive examination on the thesis. Students in Plan B are required to enroll in Music 766, Graduate Lecture Recital. A written document is required of all students electing Plan B and students are required to pass a final oral comprehensive examination on the document. Musicology students are also required to complete a written comprehensive examination.

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 (SIMS Code: 665317)

**Core:** Music 612, 654, 690.

**Program:** Music 561 (6 units), 691; 766 (Plan B) or 799A (Plan A).

**Electives:** Nine units selected from Music 545, 570, 590, 652, or from approved 600 or 700 numbered courses with a minimum of three units from 600-700 numbered courses.

#### Musicology (SIMS Code: 665335)

**Core:** Music 613, 652, 690.

**Program:** Music 611, 612, 654, 691; 766 (Plan B) or 799A (Plan A).

**Electives:** Six units selected from Music 500 and 600 level courses; of which three units must be selected from courses in history, language, literature, or arts other than music.

#### Music Theory (SIMS Code: 665341)

**Core:** Music 613, 652, 690.

**Program:** Six additional units selected from Music 613 and 614; nine units selected from Music 570-589 (1-4 units), 590, 654; and 799A.

**Electives:** Three units.

**Piano Pedagogy (SIMS Code: 665348)**

**Core:** Music 613, 652, 690.

**Program:** Music 541, 542, 554, 641, 651 (4 units); and 766 (Plan B) or 799A (Plan A).

**Electives:** Two units.

Refer to Graduate Music 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 Web site at <http://musicdance.sdsu.edu> for further information concerning admission.

**Specific Requirements for the Master of Music Degree**

**(Major Code: 10041) (SIMS Code: 665303)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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 satisfactorily complete one introductory college semester 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 (SIMS Code: 665362)**

**Core:** Music 613, 652, 690.

**Program:** Music 507; three additional units from Music 613; three additional units from Music 613 or 614; 651 (9 units); 767.

**Electives:** Two units.

**Conducting (SIMS Code: 665372)**

**Core:** Music 613, 652, 690.

**Program:** Music 554, 570-589 (2 units), 651 (9 units); 767.

**Electives:** Five units.

**Jazz Studies (SIMS Code: 665378)**

**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 (SIMS Code: 665386)**

**Core:** Music 613, 652, 690.

**Program:** Music 554, 570-589 (vocal majors must choose opera) (3 units), 651 (9 units); 767.

**Electives:** Four units.

Refer to Graduate Music Student Handbook for further details.

**Artist Diploma Advanced Certificate**

**(Major Code: 90045) (SIMS Code: 665388)**

The artist diploma prepares preprofessional performance students for professional careers by giving focused instruction in all areas of performance including technique, interpretation, repertoire, 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 of 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 qualifying placement examinations in Western music theory, Western history and literature, 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), 570-589 (vocal majors must choose opera) (4 units), 651 (8 units); 767; 798 (1 unit); four units to be selected from Music 507, 518A-518B, 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 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*.

**Courses Acceptable on Master's Degree Programs in Music (MUSIC) (DANCE)**

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

**Music (MUSIC)  
UPPER DIVISION COURSES**

**MUSIC 507. Composition Laboratory (1)**

Three hours of laboratory.

Prerequisites: Music 207 with a grade of C (2.0) or better and consent of instructor.

Continuation of Music 207. Maximum credit two units.

**MUSIC 515. Professional Orientation for Music Performers (2)**

One lecture and two hours of activity.

Prerequisite: Twelve units of upper division or graduate standing in B.M. or M.M. degree. Others by consent of instructor.

Conditions met in professional music world as well as opportunities available. Auditions, contracts, legal and tax responsibilities, media and press promotion, grants, professional management, apprenticeships.

**MUSIC 516. Performance Practice Forum (1)**

Two hours of activity.

Prerequisite: Consent of instructor.

Musical style, repertoire, presentation, and evaluation as embodied in a musical performance. May be repeated with new content. Maximum credit four units.

**MUSIC 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. Maximum credit one unit.

**MUSIC 518A-518B. Community Performance Practicum (2-2)**

One lecture and two hours of activity.

Prerequisites: Upper division or graduate standing for music and dance majors. Music 518A is prerequisite to 518B.

Production of professional-level concerts and outreach programs in the community.

## Music and Dance

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### **MUSIC 541. Performance Studies Pedagogy (3)**

Two lectures and three hours of laboratory.

Prerequisite: 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. Maximum credit three units. Not open to students with credit in Music 541A or 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. Maximum credit two units. Not open to students with credit in Music 542A or 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)**

Prerequisite: 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.

Prerequisite: 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)**

Prerequisite: Music 305B with a grade of C (2.0) or better.

Music of a specific culture. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units.

### **MUSIC 566A-566B. Jazz Arranging and Composition (2-2)**

Prerequisite: Music 305B with a grade of C (2.0) or better.

Analysis of jazz compositions and arrangements; arranging and composing for large and small jazz ensembles.

### **MUSIC 570. Advanced Chamber Music (1)**

Three hours.

Prerequisite: Consent of instructor.

Study and public performance of established repertory as well as new compositions. Sections for string, woodwind, brass, piano, vocal, and mixed ensemble groups of three or more players. May be repeated with new course content. See *Class Schedule* for specific content. Maximum credit four units.

### **MUSIC 576. Wind Symphony (1)**

Five hours.

Prerequisite: Consent of instructor.

Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

### **MUSIC 577. Symphonic Band (1)**

Five hours.

Prerequisite: Consent of instructor.

Study and performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

### **MUSIC 580. Symphony Orchestra (1)**

Five hours.

Prerequisite: Consent of instructor.

Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

### **MUSIC 583. Opera Workshop (1)**

Two hours of activity.

Prerequisites: By audition and consent of instructor.

Opera scenes, specific roles, chorus, design, and technical support functions in opera. Maximum credit four units.

### **MUSIC 584. Opera Theatre (2)**

Six or more hours per week.

Prerequisite: By audition.

Interpretation and characterization of light and grand opera. Specific work in coordination of opera ensemble. Maximum credit eight units of which six units are applicable to a master's degree.

### **MUSIC 585. Concert Choir (1)**

Five hours.

Prerequisite: Consent of instructor.

Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

### **MUSIC 586. Chamber Singers (1)**

Five hours.

Prerequisite: Consent of instructor.

Study and public performance of representative literature for the ensemble. Practical experience in rehearsal technique. Maximum credit four units.

### **MUSIC 589. Jazz Ensemble (1)**

Three hours.

Prerequisite: Consent of instructor.

Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

### **MUSIC 590. Advanced Practicum in Music (3)**

Prerequisite: Consent of instructor in area of practicum.

Students will be assigned to appropriate class sections within selected undergraduate area as instructional assistants under staff supervision.

### **MUSIC 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. Music Review: History, Analysis, and Aural Skills (3) Cr/NC**

Prerequisite: Admission to the graduate program.

Review basic concepts of music theory, aural skills, and music history required for full candidacy in the graduate music program. Not applicable to the master's degree in music.

## GRADUATE COURSES

### **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 612. Seminar in Ethnomusicology Fieldwork Theory and Method (3)**

Prerequisite: Credit or concurrent registration in Music 690.

Theory and method of ethnomusicology fieldwork research; ethnographic research, participant-observation, audio-visual documentation, musical representation and analysis, ethics; student fieldwork projects.



**MUSIC 613. Seminar in Music Theory (3)**

Prerequisite: Classified standing.

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 641. Piano Pedagogy: Adolescent to Adult (3)**

Two lectures and three hours of laboratory.

Prerequisite: Graduate standing.

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)**

Prerequisite: Classified standing.

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: Music Historiography in Global Perspective (3)**

Prerequisite: Credit or concurrent registration in Music 690.

Music history through global case studies.

**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 691. Seminar in Professional Preparation for Academia (3)**

Prerequisite: Music 690.

Professional music activities in academia. Prepare music graduate students for careers in higher education. Teaching and professional growth to include professional activities, ethics, professionalism, teaching practices, academic presentation, and publishing as related to discipline of music.

**MUSIC 696. Special Topics in Music (1-3)**

Prerequisite: Graduate standing.

Intensive study in specific areas of music. May be repeated with new content. See *Class Schedule* for specific content. 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**

Prerequisite: Consent of staff; to be arranged with school director and instructor.

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

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

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

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

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

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

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

**MUSIC 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

**Dance (DANCE)  
GRADUATE COURSES**

**DANCE 696. Special Topics in Dance (1-3)**

Prerequisite: 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.

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# Natural Science

In the College of Sciences

**OFFICE: Physics 131**  
**TELEPHONE: 619-594-6240**

**Program Coordinator: Phoebe E. Roeder, Ph.D.**

## Faculty

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.

## Courses (N SCI)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### 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 COURSE

#### **N SCI 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Consent of staff; to be arranged with coordinator and instructor.

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

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# Nursing

In the College of Health and Human Services

**OFFICE: Hardy Tower 58**  
**TELEPHONE: 619-594-5357**  
**FAX: 619-594-2765**  
**<http://nursing.sdsu.edu>**

## Faculty

John M. Lantz, Ph.D., Professor of Nursing, Emeritus,  
Interim Director of School  
Janet L. Blenner, Ph.D., F.A.A.N., Professor of Nursing  
Willa Fields, D.N.Sc., Professor of Nursing  
Diane C. Hatton, D.N.Sc., Professor of Nursing,  
Associate Director for Research  
Lauren P. Hunter, Ph.D., C.N.M., Professor of Nursing  
Linda Robinson, Ph.D., Professor of Nursing  
Jaynelle F. Stichler, D.N.Sc., F.A.C.H.E., F.A.A.N., Professor of Nursing  
Lorraine T. Fitzsimmons, D.N.S., F.N.P., A.N.P.-B.C.,  
Associate Professor of Nursing  
Sue A. Hadley, D.N.S., G.N.P., A.N.P.-B.C.,  
Associate Professor of Nursing  
Lembi Saarmann, Ed.D., Associate Professor of Nursing  
Michael Gates, Ph.D., Assistant Professor of Nursing  
Young-Shin Lee, Ph.D., Assistant Professor of Nursing  
Diane Thomason, Ph.D., 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 Nurse Practitioner, Women's Health Nurse Practitioner, or School Nursing. Students in Advanced Practice Nursing of Adults and the Elderly are prepared as adult/gerontology 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 all concentrations of study are accepted for fall semester. Applications are due by February 1 of each year for fall admission. 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 current 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 applicants, the experience must be birth related. For the Advanced Practice Nursing of Adults and Elderly, three years of related experience is highly recommended. Prior experience is not required for concentrations in Nursing Education and Nursing Leadership in Health Care Systems.
6. Students in the School Nursing Specialization must also have satisfactorily completed an undergraduate community health nursing course.
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) English language 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

## Nursing

- (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;
- (5) One copy of unofficial transcript;
- (6) GRE scores (<http://www.ets.org>, SDSU institution code 4682).

### 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 Four 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: 12032)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree, as described in Part Four of this bulletin, the student must complete an officially approved 36-60 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 (see below).

Students in all concentrations may choose between Plan A, Thesis or Project, or Plan B, Comprehensive Examination or Comprehensive Evidence-based change project. 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 nine semester units may be accepted in transfer from an accredited School of Nursing.

### Community Health Nursing Concentration

(SIMS Code: 554621)

Admission currently suspended for Community Health Nursing Concentration. Admission is open to the Specialization in Nurse-Midwife and Women's Health Care Nurse Practitioner 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>
P H 601 Epidemiology . . . . .	3
NURS 631 Community Health Nursing Practicum . . . . .	3
NURS 632 Community Health Nursing . . . . .	3
NURS 732 Advanced Community Health Nursing Practicum . . . . .	3
NURS 736 Seminar in Community Health Problems . . . . .	3
	15
Electives: . . . . .	6
NURS 799A Thesis <i>OR</i> NURS 798 . . . . .	3
	39

### Specialization as a Nurse-Midwife (SIMS Code: 554636)

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 (ACME: Accreditation Commission for Midwifery Education, 8403 Colesville Road, Suite 1550, Silver Spring, MD 20910-6374, 240-485-1802), <http://www.midwife.org/acme.cfm>, and the Commission on Collegiate Nursing Education (CCNE). Part-time (3 to 4 years) and full-time (2 years) options of study are available. Required courses and units for the two-year 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/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 Nurse Practitioner (SIMS Code: 554637)

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 (ACME: Accreditation Commission for Midwifery Education, 8403 Colesville Road, Suite 1550, Silver Spring, MD 20910-6374, 240-485-1802) and the Commission on Collegiate Nursing Education (CCNE). It is

certified by the National Certification Corporation (NCC). Part-time (3 to 4 years) and full-time (2 years) options of study are available. Required courses and units for the two-year nurse-midwife and women's health 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 . . . . .	4
NURS 638 Nurse-Midwifery Intrapartum/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 741 Integrated Women's Health/Nurse-Midwifery Clinical Practicum . . . . .	4
NURS 744 Women's Health/Nurse-Midwifery Assessment and Management III . . . . .	3
NURS 745 Women's Health/Nurse-Midwifery Clinical Practicum III . . . . .	6
	42
Total Semester Units	60

**Specialization as a Women's Health Nurse Practitioner (SIMS Code: 554638)**

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) and certified by the National Certification Corporation (NCC). Part-time (3 to 4 years) and full-time (2 years) options of study are available. Required courses and units for the two year 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 (SIMS Code: 554633)**

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

**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
SPED 500 Human Exceptionality . . . . .	3
Elective with approval of graduate adviser . . . . .	3
	19
Total Units	40

**Advanced Practice Nursing of Adults and the Elderly Concentration**

(SIMS Code: 554629)

**Specialization in Acute/Critical Care Nursing**

**(Clinical Nurse Specialist and Nurse Educator Preparation)**  
(SIMS Code: 554635)

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 OR 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)**  
(SIMS Code: 554630)

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 OR NURS 798 (Plan B) . . . . .	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**

(SIMS Code: 554641)

Graduates of the nursing education concentration will be prepared for positions in academic and/or clinical settings within three areas of specialization: Adult Health, Maternal/Newborn, and Pediatric Nursing. 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 OR NURS 798 (Plan B) . . . . .	3
Directed elective: Education focus . . . . .	3
	15

**Advanced Clinical Content (students select one specialization)**

1. Adult Health: NURS 501, 501L, 610, 658, 751 (13 units)
2. Maternal/Newborn: NURS 636, 638, 658, 744 (12 units)
3. Pediatric Nursing: NURS 601, 672, 798, CFD 537 or 560 (13 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. Pediatric Nursing: 40 units

**Nursing Leadership in Health Care Systems Concentration**  
(SIMS Code: 554645)

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
NURS 797 Research . . . . .	3
NURS 799A Thesis <i>OR</i> NURS 798 (Plan B) . . . . .	3
	Total Units 36

**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.

**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
SPED 500 Human Exceptionality . . . . .	3
Audiometry: Three unit course selected with approval of adviser . . . . .	3
Elective with approval of graduate adviser . . . . .	3
	Total Units 28

**Nursing Education Certificate**  
(Major Code: 90048) (SIMS Code: 554681)

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

### Courses Acceptable on Master's Degree Programs in Nursing (NURS)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs* sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

#### UPPER DIVISION COURSES

##### **NURS 501. Advanced Health Assessment and Health Promotion (3)**

Prerequisites: 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.

Prerequisite: 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)**

Prerequisite: Nursing 604A.

Integration of theory and research in nursing. Focus on research ethics, measurement, publishing, and grant writing in professional nursing practice.

##### **NURS 608. Nursing in the Health Care System (3)**

Nursing in a changing health care delivery system. Organizational, economic, political, and professional concepts relevant to design and delivery of nursing care.

##### **NURS 610. Pathophysiology in Adults and the Elderly (3)**

Prerequisite: Consent of graduate adviser.

Physiologic alterations associated with acute and chronic illness in adults and the elderly as a basis for primary prevention and medical and nursing interventions.

##### **NURS 620. Foundations of Nursing Administration Practice (3)**

Analysis of communication concepts appropriate to a variety of complex nursing and health care delivery systems.

##### **NURS 622. Quality Improvement and Program Evaluation in Nursing Systems Organizations (3)**

Evaluation theories and concepts within a nursing care delivery system and health care organization. Concepts of quality management, consistent with accreditation criteria and professional standards of practice.

##### **NURS 624. Nursing Care Systems and Personnel Management (3)**

Issues related to personnel resources, staff development, staff utilization and collective bargaining in health care agencies and nursing care systems.

##### **NURS 631. Community Health Nursing Practicum (3)**

Nine hours per week.

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 415, 415L, 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)**

Prerequisite: Nursing 604A.

Analysis of physiologic alterations during pregnancy and fetal development as a basis for advanced health assessment and interventions in the childbearing population.

##### **NURS 635. Advanced Practice Nursing-GYN-Primary Care Practicum (2)**

Prerequisites: Nursing 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. Maximum credit six units.

##### **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 604B, 608, 634, 635, 654, 658, 684. Concurrent registration in Nursing 641.

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 604B, 608, 634, 635, 654. Concurrent registration in Nursing 640.

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)**

Prerequisite: 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)**

Prerequisite: 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.

Prerequisite: 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.

Prerequisite: Concurrent registration in Nursing 654.

Supervised clinical experiences providing primary care to adults and elderly in diverse clinical settings.

**NURS 656. Advanced Practice Nursing: Primary Care II (3)**

Prerequisites: Nursing 654 and 655. Concurrent registration in Nursing 657.

Primary care management of adults and elderly with acute and chronic health problems. Contemporary role and psychosocial issues in advanced practice nursing of adults and elderly.

**NURS 657. Advanced Practice Nursing: Primary Care Practicum II (6)**

Eighteen hours of laboratory per week.

Prerequisites: Nursing 654 and 655. Concurrent registration in Nursing 656.

Supervised clinical experiences providing primary care to adults and elderly in diverse clinical settings.

**NURS 658. Clinical Pharmacology for Advanced Practice Nursing (3)**

Prerequisite: Consent of graduate adviser.

Pharmacologic knowledge and skills needed to manage drug therapy in various clinical settings. Emphasis on factors affecting drug selection; parameters to be monitored to determine drug effectiveness; rationale for continuing, modifying or discontinuing drug therapy.

**NURS 670. School Nursing Management Practices (3)**

Prerequisite: Admission to master's degree program in nursing or health services credential.

Management of school health services program; designed for school nurse with emphasis on professional and organizational systems.

**NURS 672. Primary Health Care of the School Aged Child (3)**

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)**

Prerequisite: Nursing 672.

Prepares school nurse to be an active participant in school health education with emphasis on planning and presentation of health instructional material focused on disease prevention and health promotion.

**NURS 684. Information Systems for Nursing (3)**

Two lectures and three hours of laboratory.

Information systems and information management in all aspects of nursing practice including client care, administration, research and education. Ethics of computer use and influence of information technology on client care. User skills.

**NURS 696. Seminar in Selected Topics in Nursing (1-3)**

Intensive study in specific areas of nursing. May be repeated with new content. See *Class Schedule* for specific content. 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.

Prerequisite: Nursing 724.

Provides observation and guided administrative experience specific to the role and function of the executive level manager in a selected health care system. Individual needs and objectives of the student are integrated into the experience.

**NURS 730. Advanced Community Health Nursing (3)**

Prerequisite: Graduate standing.

Nursing assessment and analysis of community characteristics, including social, cultural and economic factors. Design of programs which meet the needs of particular ethnic groups and health aggregates for health promotion and disease prevention.

**NURS 732. Advanced Community Health Nursing Practicum (3)**

Prerequisite: Concurrent registration in Nursing 730.

Leadership role and planning function of a community health nurse specialist in a selected community setting.

**NURS 736. Seminar in Community Health Problems (3)**

Prerequisite: Advancement to candidacy in health related disciplines

Interdisciplinary analysis of community based health practice problems.

**NURS 741. Integrated Women's Health/Nurse-Midwifery Clinical Practicum (2 or 4 or 6)**

Prerequisites: Nursing 637 and 638.

Supervised laboratory and clinical experiences (off campus) providing obstetrical, intrapartum, newborn, gynecological, primary and well women care for adolescent and adult women throughout the lifespan in diverse clinical settings. Maximum credit six units.

**NURS 742. Principles of Nurse-Midwifery II (3)**

Prerequisites: Nursing 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 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)**

Prerequisites: 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.

Prerequisite: Concurrent registration in Nursing 751.

Care management activities of acute and critical care advanced practice nurse: research-based care of select adult and elderly clients and families; consultation in coordination of client care; interdisciplinary collaboration; evaluation of care based on standards of practice.

**NURS 797. Research (1-3) Cr/NC/RP**

Prerequisite: Advancement to candidacy.

Independent research in a specialized subject. Maximum six units applicable to a master's degree.

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

Prerequisite: Consent of instructor.

Independent study. Maximum credit six units applicable to a master's degree. For students using Plan B, Comprehensive Examination is limited to three units.

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

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**

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

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

**NURS 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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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**

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

## Faculty

Fred W. Kolkhorst, 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., Associate Professor of Exercise and Nutritional Sciences

## Associateships and Assistantships

Graduate teaching associateships are available for a limited number of qualified students. These provide essential education, technical training, and creative experience necessary for future professional and scholarly activity or college-level teaching. Graduate assistantships are also available in some cases to aid faculty research. Application blanks and additional information on graduate programs may be obtained from the School of Exercise and Nutritional Sciences Web site at <http://ens.sdsu.edu>.

## 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.

In order to be granted permission to enroll in coursework leading to completion of the didactic program in dietetics (accredited by the Commission on Accreditation for Dietetics Education), students admitted to the Master of Science degree program in nutritional sciences, or the dual degree program Master of Science in nutritional sciences and Master of Science in exercise physiology, must have completed all of the following (or equivalent courses) with a GPA of 3.6 or higher: Biology 100, 100L, 211, 211L, 336; Chemistry 100, 130, 160; and a statistics course (e.g. Psychology 270).

## 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) English language 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 Four of this bulletin.

### Specific Requirements for the Master of Science Degree

(Major Code: 13061) (SIMS Code: 662933)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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 Sciences 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 Four of this bulletin.

### Specific Requirements for the Master of Science in Nutritional Sciences and Master of Science in Exercise Physiology

(Major Code: 08356) (SIMS Code: 662990)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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.

## Courses Acceptable on Master's Degree Programs (NUTR)

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### 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)

Prerequisite: 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)

Prerequisite: Nutrition 406. Recommended: Chemistry 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

Prerequisite: Consent of staff; to be arranged with the instructor and approval of graduate program adviser.

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

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

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

Preparation of a thesis for the master's degree.

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

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

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

#### NUTR 799C. Comprehensive Examination Extension (0) Cr/NC

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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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

Todd W. Anderson, Ph.D., Professor of Biology,  
Director of Coastal and Marine Institute  
Richard M. Gersberg, Ph.D., Professor of Public Health  
Stephen A. Schellenberg, Ph.D., Associate 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

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### 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 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 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 Mechanism of Toxicity (3)  
P H 639 Water Quality Investigation (3)

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\* 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

Mark R. Wheeler, Ph.D., Associate Professor of Philosophy,  
Chair of Department

J. Angelo Corlett, Ph.D., Professor of Philosophy

Robert M. Francescotti, Ph.D., Professor of Philosophy

Darrel Moellendorf, Ph.D., Professor of Philosophy

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

Sandra A. Wawrytko, 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. The purpose of the MA program in philosophy is to provide students with rigorous advanced training in philosophical reasoning on philosophical topics. The program serves students who wish to go on to pursue Ph.D. work in philosophy or other areas of advanced study; who seek skill development for professional careers such as teaching, law, business, and public service; and who seek personal enrichment through disciplined reflection on important and profound philosophical questions.

*Note bene:* Anyone applying to do graduate work in philosophy with the hope of eventually teaching philosophy needs to be aware that there are currently many more candidates for positions in teaching philosophy than there are positions available.

## 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 the Graduate Bulletin. To be considered for admission to the graduate program in the Department of Philosophy with classified status, an applicant must fulfill the following requirements:

1. All students must hold a baccalaureate degree from an accredited U.S. institution or equivalent degree. The degree should be in the field of philosophy.
2. A minimum grade point average of 3.3 in upper division work in philosophy with an overall minimum grade point average of 3.0 is required.

Conditional admittance: Unusually promising students who do not meet all the above requirements may be accepted into the program with conditional status. Students who are accepted conditionally with 12-23 units of upper division philosophy will be required to take additional units (beyond the 30 units required for the M.A. degree) to meet the minimum qualification of having earned 24 units of upper division philosophy before achieving classified standing. Applicants who have an overall grade point average of 2.85-2.99 and an average of 3.3 in upper division philosophy may be considered for conditional admittance.

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 the Department of Philosophy.

## 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) English language 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: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-6044

- (1) A letter describing the applicant's reasons for pursuing graduate study in philosophy.
- (2) A sample of the applicant's writing (about 2,000 words) that provides evidence of a capacity for careful analytic thought.
- (3) Two letters of recommendation.
- (4) An official report of a GRE score is required. The department has not set any minimum score to be achieved on the GRE, but the score along with all other materials will be taken into consideration in evaluating each application.

## Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as stated in Part Four of the Graduate Bulletin.

In order to advance to candidacy in the philosophy M.A. program, every graduate student must demonstrate reading proficiency in a language other than English. Languages may include both the formal languages of logic and mathematics and natural languages other than English (as appropriate to one's studies in philosophy). 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 B 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.

To be advanced to candidacy, a student must have achieved and maintain an overall grade point average of 3.3.

### Specific Requirements for the Master of Arts Degree

(Major Code: 15091) (SIMS Code: 115301)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of the Graduate Bulletin, the student must complete a program of 30 units of graduate coursework (500-799) selected with the approval of the graduate adviser. Students must complete a minimum of 24 units from courses in philosophy. The 24 units shall include 799A and a minimum of 12 units in 600-level courses.

At the beginning of every fall semester, every new graduate student is expected to attend an orientation designed to familiarize students with the program and to help them to get to know the faculty and other students in the program.

All courses taken to satisfy the master's degree requirements must be taken for a letter grade when this option is available. Graduate students must maintain at least a 3.0 grade point average in graduate courses taken in the degree program and may not advance to candidacy with less than a 3.3 grade point average. Grades of C or higher for graduate courses are accepted for graduate credit. (The numerical equivalents are as follows: A=4.0, A-=3.7, B+=3.3, B=3.0, B-=2.7, C+=2.3, C=2.0, D+=1.3, D=1.0, D-=0.7, F=0.0.) A grade point average below 3.0 at any time during a graduate student's studies is considered unsatisfactory and will result in the student's being placed on academic probation for the following semester. Students who are still achieving a grade point average below 3.0 at the end of the probationary period are subject to immediate dismissal from the program.

To be eligible to enroll in Philosophy 799A, a student must be advanced to candidacy. Each student will arrange for a committee of no less than three tenured/tenure track SDSU faculty members (two of these necessarily must be from the Philosophy Department; one of the three must be from outside the Philosophy Department). One faculty member from the Philosophy Department will serve as the chair/director of the thesis.

### Courses Acceptable on Master's Degree Program in Philosophy (PHIL)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs* sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

#### UPPER DIVISION COURSES

##### PHIL 506. Twentieth Century Continental Philosophy (3)

Prerequisite: Six upper division units in philosophy.  
Major figures and movements in European philosophy from Husserl to the present.

##### PHIL 508. Existentialism (3)

Prerequisite: Six units in philosophy.  
The philosophical aspects of existentialism. Major emphasis is on the diversity of thought within a common approach as this is shown in individual thinkers.

##### PHIL 510. Philosophy of Law (3)

Prerequisites: Three units from Philosophy 101, 102, or 103; and three units from philosophy or political science.  
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)

Prerequisite: Philosophy 110 or 120. Recommended: Philosophy 120.

Principles of inference for symbolic deductive systems; connectives, quantifiers, relations and sets. Interpretations of deductive systems in mathematics, science and ordinary language. Not open to students with credit in Mathematics 523.

##### PHIL 523. Theory of Knowledge (3)

Prerequisite: Six units in philosophy.  
Philosophical analysis of knowledge, including conceptions of belief, justification, and truth.

##### PHIL 525. Metaphysics (3)

Prerequisite: Six units in philosophy.  
Prominent theories of reality, e.g., realism and nominalism, materialism and idealism, teleology and determinism.

##### PHIL 528. Theory of Ethics (3)

Prerequisite: Six units in philosophy.  
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)

Prerequisite: Six units in philosophy.  
An introduction to theories of meaning for natural languages and formal systems; concepts of truth, synonymy and analyticity; related epistemological and ontological problems.

##### PHIL 535. Philosophy of Religion (3)

Prerequisite: Six units in philosophy.  
Philosophical analysis of the nature and existence of God.

##### PHIL 536. Philosophy of Mind (3)

Prerequisite: 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)

Prerequisite: Six units in philosophy.  
The basic concepts and methods underlying contemporary scientific thought. Contributions of the special sciences to a view of the universe as a whole.

##### PHIL 542. Philosophy of Art (3)

Prerequisite: Six units in philosophy.  
The nature of aesthetic experience. Principal contemporary theories of art in relation to actual artistic production and to the function of art in society.

##### PHIL 543. Philosophy and Literary Theory (3)

Prerequisites: Three upper division units in philosophy and three upper division units in literature.  
Relations between philosophy and literary discourse. Strategies of interpretation offered by major contemporary thinkers.

##### PHIL 565. Asian Philosophies (3)

Prerequisite: Philosophy 351 or Philosophy 353.  
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)

Prerequisite: Six upper division units in philosophy.  
The writings of one major philosopher. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to the major. Maximum credit six units applicable to a master's degree.



**PHIL 596. Selected Topics (3)**

Prerequisite: Six upper division units in philosophy.

A critical analysis of a major problem or movement in philosophy. May be repeated with new content. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of 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)**

Prerequisite: Twelve upper division units in philosophy.

A major philosopher, school, or problem. Their historical roots and subsequent historical significance. See *Class Schedule* for specific content. May be repeated with new content. Maximum credit nine units applicable to a master's degree.

**PHIL 610. Seminar in Philosophical Problems: Values (3)**

Prerequisite: Twelve upper division units in philosophy.

Problems in such fields as ethics, politics, aesthetics. See *Class Schedule* for specific content. May be repeated with new content. Maximum credit nine units applicable to a master's degree.

**PHIL 620. Seminar in Philosophical Problems: Knowledge and Reality (3)**

Prerequisite: Twelve upper division units in philosophy.

A problem or group of problems in metaphysics, epistemology and logic. See *Class Schedule* for specific content. May be repeated with new content. Maximum credit nine units applicable to a master's degree.

**PHIL 630. Seminar in Current Philosophical Issues (3)**

Prerequisite: Twelve upper division units in philosophy.

Problems in current philosophical publications. See *Class Schedule* for specific content. May be repeated with new content. Maximum credit nine units applicable to a master's degree.

**PHIL 696. Seminar in Selected Topics (3)**

Prerequisite: Twelve upper division units in philosophy.

Intensive study in specific areas of philosophy. 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)**

Prerequisite: 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**

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

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

**PHIL 799C. Comprehensive Examination Extension (0) Cr/NC**

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.

Physical Education

Refer to "Exercise Physiology" and "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

Calvin W. Johnson, Ph.D., Professor of Physics

Patrick J. Papin, Ph.D., Professor of Physics and Associate Dean for  
Academic Affairs of the College of Sciences

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

Fridolin Weber, Ph.D., Professor of Physics (Graduate Adviser)

Matthew E. Anderson, Ph.D., Associate Professor of Physics

Arlette R.C. Baljon, Ph.D., Associate Professor of Physics

Michael W. Bromley, Ph.D., Associate 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 program is designed to provide students with university-level teaching experience and access to community college teaching positions.

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. The program is designed to provide students with university-level teaching experience and access to community college teaching positions.

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) English language 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

#### Master of Science Degree in Radiological Health 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 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 Four of this bulletin, and satisfactory completion of Physics 604, 606, 608, and 610A.

## Specific Requirements for the Master of Arts Degree in Physics

(Major Code: 19021) (SIMS Code: 777702)

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 Four of this bulletin. The student's graduate program must include Physics 604, 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) (SIMS Code: 777701)

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 Four of this bulletin.

The student must complete a graduate program to include Physics 604, 606, 608, 610A, 797 (3 units) and 799A. Twelve additional units of 500-, 600-, or 700-numbered electives must be selected with the approval of the Physics department graduate adviser. The student is required to pass a final oral examination on the thesis.

## Master of Science Degree in Radiological Health Physics

### Admission to 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 Four of this bulletin.

## Specific Requirements for the Master of Science Degree in Radiological Health Physics

(Major Code: 12251) (SIMS Code: 777768)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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.

## Courses Acceptable on Master's Degree Programs in Physics (PHYS)

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### UPPER DIVISION COURSES

#### PHYS 532. Condensed Matter Physics (3)

Prerequisite: 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 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 560. Radiological Physics and Dosimetry (3)

Prerequisite: Credit or concurrent registration in Physics 354. Ionizing radiation fields, interactions of radiation with matter, cavity theory, external radiation dosimetry.

#### PHYS 561. Nuclear Instrumentation (3)

One lecture and six hours of laboratory. Prerequisites: Physics 311 and 560. Radiation detection, measurement, and spectroscopy. Ionization chambers, GM and proportional counters, scintillation and semiconductor detectors, and thermoluminescent dosimetry.

#### PHYS 564. Nuclear Physics (3)

Prerequisite: 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; 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.

## Physics

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### **PHYS 596. Special Topics in Physics (1-4)**

Prerequisite: Consent of instructor.

Selected topics in classical and modern physics. May be repeated with the consent of the instructor. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### **GRADUATE COURSES**

### **PHYS 600. Seminar (1-3)**

Prerequisite: Consent of instructor.

An intensive study in advanced physics. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

### **PHYS 604. Electromagnetic Theory (3)**

Prerequisite: Physics 400B.

Electrostatics, magnetic induction, and magnetostatics, Maxwell's equations, electromagnetic waves and radiation, fields in macroscopic media, special relativity. (Formerly numbered Physics 604A.)

### **PHYS 606. Statistical Mechanics (3)**

Prerequisites: Physics 360, 410, 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 Schrodinger Equation, matrices and Hilbert space, angular momentum and spin, atomic structure, bound-state perturbation theory, many particle systems, transition rates and time-dependent perturbation theory, scattering, and relativistic quantum mechanics.

### **PHYS 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 672A. Radiation Therapy Physics Laboratory (3)**

One lecture and six hours of laboratory.

Prerequisite: Physics 670A.

Skills to perform radiation therapy physics procedures.

### **PHYS 672B. Diagnostic Imaging Laboratory (3)**

One lecture and six hours of laboratory.

Prerequisite: Physics 670B.

Skills to perform quality assurance and acceptance testing on radiological equipment in a clinical setting.

### **PHYS 680. Magnetic Resonance Imaging (3)**

Prerequisites: Physics 670B or Mathematics 342A and Physics 354.

Nuclear magnetic resonance, relaxation theory, Fourier transform MR imaging physics, imaging sequences, optimization of signal and contrast, special imaging sequences to include MR angiography, functional MRI, diffusion and perfusion MRI, MR hardware and configuration.

### **PHYS 690. Medical Imaging Processing (3)**

Two lectures and three hours of laboratory.

Prerequisite: Physics 670B.

Digital image processing to include medical image formats, image enhancement, restoration, registration, segmentation, representation, and programming.

### **PHYS 696. Advanced Topics in Physics (1-3)**

Prerequisite: 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**

Prerequisite: Consent of graduate adviser.

Research in one of the fields of physics. Maximum credit six units applicable to a master's degree.

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

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

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

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

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

Preparation of a thesis in physics for the master's degree.

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

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

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

### **PHYS 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

## Policy Studies in Language and Cross-Cultural Education

Refer to "Education" in this section of the bulletin.

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# Political Science

In the College of Arts and Letters

**OFFICE: Nasatir Hall 103**

**TELEPHONE: 619-594-6244 / FAX: 619-594-7302**

## Faculty

Madhavi M. McCall, Ph.D., Professor of Political Science,  
Chair of Department

Mikhail A. Alexseev, Ph.D., Professor of Political Science

David V. Carruthers, Ph.D., Professor of Political Science

Lei Guang, Ph.D., Professor of Political Science

Dipak K. Gupta, Ph.D., Distinguished Professor of Political Science,  
Emeritus

Edward V. Heck, Ph.D., Professor of Political Science, Emeritus

Ronald F. King, Ph.D., Professor of Political Science

Farid Abdel-Nour, Ph.D., Associate Professor of Political Science

Brian E. Adams, Ph.D., Associate Professor of Political Science

Jonathan Graubart, Ph.D., Associate Professor of Political Science

C. Richard Hofstetter, Ph.D., Associate Professor of Political Science,  
Emeritus

Carole Kennedy, Ph.D., Associate Professor of Political Science

Kristen Hill Maher, Ph.D., Associate Professor of Political Science  
(Graduate Adviser)

Emanuelle G. Saccarelli, Ph.D., Associate Professor of Political  
Science

Ronnee D. Schreiber, Ph.D., Associate Professor of Political Science

Latha Varadarajan, Ph.D., Associate Professor of Political Science

Adam Branch, Ph.D., Assistant Professor of Political Science

Ahmet T. Kuru, 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 associateships.

## 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);

## Political Science

- (3) English language 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 Four 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) (SIMS Code: 115501)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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 **(SIMS Code: 115501)**:

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 **(SIMS Code: 115560)**:

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 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.

Specific requirements for students selecting the international relations/comparative politics specialization are **(SIMS Code: 115551)**:

1. POL S 515 Research Design and Analysis in Political Science (3)  
POL S 516 Statistics for Political Scientists (3), or its equivalent.

### AND

2. POL S 601 Seminar in the Scope and Method of Political Science (3)
3. POL S 655 Seminar in General Comparative Political Systems (3)
4. POL S 675 Seminar in International Relations (3)
5. 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.

## Courses Acceptable on Master's Degree Program in Political Science (POL S)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### Field I: Political Theory UPPER DIVISION COURSES

#### POL S 507. Marx and Marxism (3)

Prerequisite: 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)

Prerequisite: 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.

### Field II: American Politics UPPER DIVISION COURSES

#### POL S 530. Political Parties (3)

Prerequisite: Political Science 102 or 320.

The political party as a part of the process of government; party organization and activities; nominating and campaign methods; theories and functions of the party system; party responsibility. The functioning of political parties in the American political system. May include a substantial amount of material about foreign political systems.

#### POL S 531. Interest Groups and Political Movements (3)

Prerequisite: Political Science 101 or 102.

Pressure group activity, lobbies, mass movements; factors which explain origins and motivations of group behavior; votes, money, information, protest as political resources; theories of pluralism, power elite and mass society; class and ethnic politics. May include a substantial amount of material about foreign political systems.

#### POL S 533. Democracy in America (3)

Prerequisite: 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)

Prerequisite: Political Science 103.

An examination of selected political and governmental systems for purposes of comparative study and analysis to determine similarities, differences and general patterns and universals among political systems.

#### POL S 560. Comparative Public Policy (3)

Prerequisite: Political Science 103 or 335.

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)

Prerequisite: Upper division or graduate standing.

Comparative examination of environmental politics and policy in major world regions. Considers environmental politics with related policy challenges of economic growth, equity, and social justice. Course content varies with regional focus.

#### POL S 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)

Prerequisite: Political Science 101 or 103.

General pattern of politics and political development in Latin America with an emphasis on those features which condition domestic and foreign policy making.

#### POL S 567. Political Systems of Latin America (3)

Prerequisite: Political Science 566.

Domestic and international politics of selected Latin American states.

#### POL S 568. Mexican Politics (3)

Prerequisite: Political Science 101 or 103.

Principal factors in Mexican governmental decision making. Ideology, political groups, tactics of leaders and governmental structure

### Field IV: International Politics UPPER DIVISION COURSES

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

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: Political Science 601.

Political science literature focusing on major areas of political behavior including study of political attitudes, voting, and political communication.

#### **POL S 630. Seminar in Politics (3)**

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)**

Prerequisite: 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)**

Prerequisite: Graduate standing.

Migration and border politics within a global perspective. Transformations of sovereignty, territory, identity, and rights in an era of mass migration. May focus on U.S.-Mexican border region or other migration contexts internationally. May be repeated with different content.

#### **POL S 655. Seminar in General Comparative Political Systems (3)**

Prerequisites: Political Science 555, and three additional upper division units in political science.

The field of comparative politics, including historical developments, major theoretical approaches, substantive concerns, uses and limitations of the comparative method, methodological innovations in study of foreign political systems.

#### **POL S 658. Seminar in Post-Communist Political Systems (3)**

Prerequisite: Graduate standing.

Nature of Communist political systems and processes of transition to post-communist forms of government. Possibilities for development of democratic institutions examined theoretically and empirically.

#### **POL S 661. Seminar in the Political Systems of the Developing Nations (3)**

Prerequisite: Six upper division units in political science.

Theoretical analysis of political development, modernization and industrialization in the emerging nations. Search for valid generalizations about the non-Western political process. Political trends and developments in the developing nations.

#### **POL S 667. Seminar in Latin American Political Systems (3)**

Prerequisite: Political Science 555 or 566.

Political developments in selected Latin American nations. May be repeated with new content. Maximum credit six units applicable to a master's degree.

#### **POL S 675. Seminar in International Relations (3)**

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

#### **POL S 676. Seminar in International Political Economy (3)**

Prerequisite: Six upper division political science units in international relations.

Major theoretical approaches applied to various interstate issues of the world economy.

#### **POL S 696. Seminar in Selected Topics in Political Science (3)**

Prerequisite: Graduate standing.

Selected topics in political science. May be repeated with new content. See *Class Schedule* for specific content. 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**

Prerequisite: Consent of the department chair.

Research in political theory, political parties, comparative government, international relations, public law or American government.

#### **POL S 798. Special Study (1-3) Cr/NC/RP**

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

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

#### **POL S 799A. Thesis (3) Cr/NC/RP**

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

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

#### **POL S 799B. Thesis Extension (0) Cr/NC**

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

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

#### **POL S 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.



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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

Nader Amir, Ph.D., Professor of Psychology

Catherine J. Atkins, Ph.D., Professor of Psychology and Associate  
Dean for Faculty Affairs of the College of Sciences

Donna Castañeda, Ph.D., Professor of Psychology

Thereasa A. Cronan, Ph.D., Professor of Psychology

Richard G. Graf, Ph.D., Professor of Psychology

Kate Hattrup, Ph.D., Professor of Psychology

Elizabeth A. Klonoff, Ph.D., Professor of Psychology,  
Co-Director of Clinical Training and of Doctoral Program

Vanessa L. Malcarne, Ph.D., Professor of Psychology

Nancy A. Marlin, Ph.D., Professor of Psychology and  
University Provost

Sarah N. Mattson Weller, Ph.D., Professor of Psychology

Robert F. McGivern, Ph.D., Professor of Psychology

Ralph-Axel Mueller, 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 and Associate Dean of  
the Division of Graduate Affairs

Stephen K. Reed, Ph.D., Professor of Psychology

Judy S. Reilly, Ph.D., Professor of Psychology

Edward P. Riley, Ph.D., Distinguished Professor of Psychology

Dennis P. Saccuzzo, Ph.D., Professor of Psychology

James F. Sallis, Jr., Ph.D., Distinguished Professor of Psychology

Thomas R. Scott, Ph.D., Professor of Psychology

Jennifer D. Thomas, Ph.D., Professor of Psychology  
(Graduate Adviser)

Jean M. Twenge, Ph.D., Professor of Psychology

Jeffrey M. Conte, Ph.D., Associate Professor of Psychology

Thierry Devos, Ph.D., Associate Professor of Psychology

Mark G. Ehrhart, Ph.D., Associate Professor of Psychology  
(Graduate Adviser)

Margaret Friend, Ph.D., Associate Professor of Psychology

Linda C. Gallo, Ph.D., Associate Professor of Psychology

Paul E. Gilbert, Ph.D., Associate Professor of Psychology

Scott C. Roesch, Ph.D., Associate Professor of Psychology

V. Robin Weersing, Ph.D., Associate Professor of Psychology

May Yeh, Ph.D., Associate Professor of Psychology

Susan M. Brasser, Ph.D., Assistant Professor of Psychology

Elizabeth D. Cordero, 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

Sara J. Unsworth, Ph.D., Assistant Professor of Psychology

Allison A. Vaughn, 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. These programs can prepare students for teaching careers.

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 post-secondary 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) English language or IELTS score, if the language of instruction was not English (for English language 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. The GRE Subject (Advanced Test in Psychology) is optional but highly recommended to non-psychology majors. 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 Four 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 Four 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) (SIMS Code: 778301)

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) (SIMS Code: 778301)

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 (SIMS Code: 778303) 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 (SIMS Code: 778304) 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).**

(Major Code: 20031) (SIMS Code: 778309)

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 or CLIN 205), 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) (SIMS Code: 778310)

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 71st 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 1.*

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 Four 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, Cronan, Elder, Gallo, Gilbert, Hovell, Klonoff, Litrownik, Malcarne, Marshall, Matt, Mattson, Mayer, Mueller, Murphy, Price, Reilly, Riley, Roesch, M. Sadler, Sallis, Thomas, Weersing, Wulfeck, Yeh

### University of California, San Diego:

Program Director: Heaton

Program Members: Afari, Akshoomoff, Ancoli-Israel, Atkinson, Ballantyne, Bellugi, Bondi, Boutelle, Braff, Brookman-Frazee, G. Brown, S.A. Brown, S.J. Brown, Cadenhead, Calfas, Caligiuri, Carver, Cherner, Corey-Bloom, Courchesne, Delis, Dimsdale, Dobkins, Drummond, Eyler, Feifel, Filoteo, Garland, Geyer, Gollan, Granholm, Grant, Groessl, Haist, Harrington, Jernigan, Jeste, L. Judd, P. Judd, Kelson, Kremen, Kulik, Lang, Levine, Light, Lohr, Marcotte, Matloff, Mausbach, Max, McCabe, McDonald, Mills, Moore, Myers, Nichols, G. Norman, M. Norman, S. Norman, Palmer, Parry, Patterson, Paulus, Perry, Rutledge, G. Sadler, Salmon, Schreiber, Schuckit, Sieber, Sparta, Squire, Stein, Stiles, Strathdee, Swerdlow, Tapert, Taylor, Townsend, Trauner, Wall, Wetherell, Woods, Zhu, Zisook, Zuniga

## Courses Acceptable on Master's and Doctoral Degree Programs in Psychology (PSY)

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### UPPER DIVISION COURSES

#### PSY 501. History of Psychology (3)

Prerequisite: Limited to graduate students or psychology majors with senior standing.

Historical background of modern psychology.

#### PSY 561. Advanced Neuropsychology (3)

Prerequisite: Psychology 360 or 361 or grade of B or better in Psychology 260.

Biological bases of neuropsychological function and dysfunction, relationships between brain structure and function, neuropsychological assessment tools.

#### PSY 587. Advanced Principles of Learning and Cognition (3)

Prerequisites: Psychology 211, 280, 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

Prerequisite: Admission to the master's degree program.

Research in psychology. All master's degree students are required to enroll in this course. Maximum credit two units.

#### PSY 610. Advanced Research Methods in Psychology (3)

Prerequisite: Admission to the master's degree program.

Diverse research methods across different areas of psychology. Interdependence of theory and methodology in research to include design, measurement, and validity.

**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)**

Prerequisite: Graduate standing in psychology.

Theory and practice of program evaluation. Surveys concepts, issues, and methods relevant to evaluating programs, services, and interventions in the public and private sectors.

**PSY 632. Theories and Methods in Developmental Psychology (3)**

Prerequisite: Psychology 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)**

Prerequisite: 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 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)**

Prerequisite: Psychology 630.

Examines intellectual foundations, current debates, and innovative methods in program evaluation and their impact on planning, conducting, and using evaluations.

**PSY 732. Seminar in Developmental Psychology (3)**

Prerequisite: Psychology 632.

In-depth examination of a selected aspect of development, such as cognition, social, perceptual or language development or the neural substrates of development.

**PSY 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)**

Prerequisite: 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)**

Prerequisite: Undergraduate social psychology.

Formation and organization of attitudes. Social influence processes through which attitudes are changed. Relationship between attitudes and overt actions in various behavioral domains.

**PSY 751. Clinical Psychology: Theory and Practice (3)**

Prerequisites: Graduate standing in psychology and Psychology 350.

Clinical assessment, theory and practice of behavior change, and professional ethics.

**PSY 757. Seminar in Selected Topics in Clinical Psychology (1-3)**

Prerequisite: 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 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 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 790. Practicum in the Teaching of Psychology (1) Cr/NC/RP**

Prerequisite: Award of a graduate teaching associateship in psychology.

Supervision in the teaching of psychology, covering lecture writing, style of lecture presentation, in-class demonstration and exercise, test and syllabi construction, and grading system. Not applicable to an advanced degree.

### **PSY 791. Internship in Program Evaluation (1-6) Cr/NC/RP**

Up to 20 hours of supervised work per week in a program approved internship setting.

Prerequisites: Psychology 630 and consent of instructor.

Supervised training in program evaluation in a program approved internship setting. Maximum credit six units.

### **PSY 792. Internship in Industrial and Organizational Psychology (1-6) Cr/NC/RP**

Up to 20 hours of supervised work per week in a program approved internship setting.

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**

Prerequisite: 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**

Prerequisite: 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**

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

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

## **DOCTORAL COURSES**

### **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)**

Prerequisite: 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.

Prerequisite: Consent of graduate adviser.

Supervised practice in application of psychotherapeutic and counseling techniques from selected cognitive, dynamic, interpersonal, and behavioral approaches. Open only to students accepted in the doctoral program.

### **PSY 850. Seminar in Theory and Practice in Clinical Interventions (3)**

Prerequisite: Admission to doctoral program in clinical psychology.

Theory and application of clinical interventions, advanced study of interviewing techniques, behavioral interventions, cognitive/behavioral interventions, and family/child interventions.

### **PSY 852. Seminar in Experimental Psychopathology Research (3)**

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 875. Advanced Multivariate Statistics (3)**

Two lectures and two hours of activity.

Prerequisites: Admission to the doctoral program in clinical psychology, Psychology 770A-770B, and consent of instructor.

Use of multivariate techniques. Relationship between latent constructs and observable data. Analyses such as causal models, exploratory and confirmatory factor analysis, canonical correlation, path analysis, discriminant function analysis, loglinear analysis, and hierarchical linear modeling using computer-based statistical packages.

**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)**

Prerequisite: Admission to the doctoral program.

Supervision of advanced intervention strategies applied to clinical populations.

**PSY 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Independent investigation in the general field of the dissertation.

**PSY 898. Doctoral Special Study (1-8) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Individual study in the field of specialization. Maximum credit eight units applicable to the doctoral degree.

**PSY 899. Doctoral Dissertation (1-15) Cr/NC/RP**

Prerequisites: An officially constituted dissertation committee and advancement to candidacy.

Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.

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# Public Administration

In the School of Public 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

Louis M. Rea, Ph.D., Professor of Public Affairs, Interim Director of School (M.P.A. Graduate Coordinator)  
Roger W. Caves, Ph.D., Professor of Public Affairs  
James A. Gazell, Ph.D., Professor of Public Affairs  
Lawrence A. Herzog, Ph.D., Professor of Public Affairs (M.C.P. Graduate Coordinator)  
Darrell L. Pugh, Ph.D., Professor of Public Affairs  
L. Paul Sutton, Ph.D., 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  
Maurizio Antoninetti, Ph.D., Assistant Professor of Public Affairs  
Salvador Espinosa, Ph.D., Assistant 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) English language 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 Four 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) (SIMS Code: 666901)

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 Four 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 administrative duties. 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) (SIMS Code: 666926)

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) (SIMS Code: 666918)

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)

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

### General Information

The School of Public Affairs and the Center for Latin American Studies offer a concurrent graduate program leading to a Master of Public Administration and a Master of Arts in Latin American Studies. This concurrent degree program offers students preparation in the fields of public administration and Latin American studies for the purpose of public administration in fields requiring bi-national understanding of administration in the public sector.

If a student in the concurrent graduate program returns to a single degree program, none of the provisions of the concurrent degree program shall pertain. Transfer units will not be accepted towards the concurrent degrees, nor will previous graduate study or prior degrees be accepted toward meeting the unit requirements.

## 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 Four of this bulletin. The successful applicant will also satisfy the requirements for both the Master of Public Administration and the Master of Arts in Latin American Studies. To be admitted to the program, students must have (1) a 3.0 grade point average in the undergraduate major and 2.85 overall and (2) an acceptable score on 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 as described in Part Four of this bulletin.

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 92182-6038

- (1) Personal statement;
- (2) Three letters of reference from individuals who have known the student's academic performance (one letter may be from an individual who knows the employment performance of the student).

## Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin and be recommended by the graduate advisers of both programs. In addition, all students must (1) complete Public Administration 600 and three additional courses selected from Public Administration 604, 605 or 606, 630, 642, 650, 660; (2) complete Latin American Studies 600 and 601; (3) achieve a grade point average of 3.0 in these course with no grade below B-; (4) satisfactorily complete Spanish 201 and 202, or Portuguese 201, or their equivalents, or 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; (5) demonstrate international experience in Latin America through an approved study abroad or an international internship experience, or successful completion of Latin American Studies 550, an approved study abroad experience course.

## Specific Requirements for the MPA/MA Degree

(Major Code: 21020) (SIMS Code: 666905)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete an officially approved course of study consisting of 54-66 units as outlined below.

1. Complete the following core of eight courses (24 units):
 

P A 600	Scope of Public Administration (3)
P A 604	Methods of Analysis in Public and Urban Affairs (3)
P A 630	Seminar in Public Personnel Administration (3)
P A 642	Seminar in Administrative Theory (3)
P A 650	Seminar in Public Financial Management (3)
P A 660	Administration and Public Policy Development (3)
LATAM 600	Seminar in Latin American Studies (3)
LATAM 601	Seminar on Methodology of Latin American Studies (3)
2. Complete one of the following courses (3 units):
 

P A 605	Seminar in Research Methods in Public Administration (3)
P A 606	Seminar in Quantitative Approaches to Public Administration (3)

## Public Administration

3. Complete three courses in one theme listed below (9 units):

### City Planning Theme

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)

### Criminal Justice Administration Theme

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)

### Public Personnel and Labor Relations Theme

P A 530	Negotiation and Bargaining in the Public Service (3)
P A 531	Governmental Employer-Employee Relations (3)
P A 632	Seminar of Organization Development in the Public Sector (3)
P A 643	Seminar in Administrative Behavior (3) (Offered only at IVC)

### General Public Administration Theme

P A 620	Seminar in Management of Urban Governments (3)
P A 632	Seminar of Organization Development in the Public Sector (3)
P A 640	Seminar in Public Administration (3)
P A 680	Seminar in Transborder Public Administration and Governance (3)
P A 681	Seminar in Comparative Federalism: Mexico and the U.S. (3)
P A 683	Seminar in Environmental Administration and Management in the Transborder Region (3)
P A 684	Seminar in Transnational Criminal Justice: Mexico and the U.S. (3)
P A 685	Practicum in Border Research (3)
P A 686	Seminar in Data Sources and Policy Analysis on the U.S./Mexico Border (3)
P A 687	Seminar in Comparative Urban Planning: Mexico and U.S. (3)

4. Complete five courses from at least two departments (15 units):

### Latin American Studies

LATAM 510	Latin America Research Through Primary Sources (3)
LATAM 540	History, Society, and Ecology of Baja Peninsula (3)
LATAM 550	Mexican-US Border from a Latin American Perspective (3)
LATAM 555	Women's Rights and Citizenship in Latin America (3)
LATAM 560	Latin America after World War II (3)
LATAM 580	Special Topics* (3)
LATAM 700	Current Issues in Latin American Politics (3)
LATAM 797	Research (3) Cr/NC/RP
LATAM 798	Special Study (3) Cr/NC/RP

### Anthropology

ANTH 520	Ethnographic Field Methods (3)
ANTH 540	Contemporary Cultures of Mesoamerica (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)
ECON 600-level	or above; may include related elective: ECON 561 International trade (3) or ECON 592 International Monetary Theory and Policy (3)

### History

HIST 550	Colonial Mexico (3)
HIST 551	Modern Mexico (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 522	The Family in Comparative and Cross-Cultural Perspectives (3)
SOC 554	United States-Mexico Transborder Populations and Globalization (3)
SOC 555	Immigrants and Refugees in Contemporary American Society (3)
SOC 740	Seminar in Social Psychology: Sociological Approaches* (3)

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

- Students must complete P A 799A or LATAM 799A or P A 797 or LATAM 797 (3 units). The thesis (P A 799A or LATAM 799A) must treat a Latin American related topic in public administration and will be supervised by at least one public administration faculty and at least one member of the Latin American studies faculty. A culminating research experience (P A 797 or LATAM 797) must incorporate field research or an internship, and must result in a project that is approved by the graduate advisers in both programs.
- An internship of 12 units (one semester) beyond the coursework is required of students who have not had equivalent experience. Students should consult with the public administration graduate adviser before enrolling.
- 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.

## Transborder Public Administration and Governance Certificate

(Offered through the College of Extended Studies)

No new students are being admitted to this program. For further information, contact the School of Public Affairs.

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

- 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.
- 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 (12 units)

P A 680	Seminar in Transborder Public Administration and Governance (3)
P A 681	Seminar in Comparative Federalism: Mexico and the U.S. (3)
P A 685	Practicum in Border Research (3)
Electives:	Three units selected with approval of adviser.

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. Louis M. Rea.

## Courses Acceptable on Master's Degree Program in Public Administration (CJ) (P A)

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### Public Administration (P A) UPPER DIVISION COURSES

#### P A 501. Nonprofit Organizations and Government (3)

Prerequisites: Public Administration 301 and 460.

How nonprofit organizations interact with government institutions, influence and pressure government through policy advocacy and activism, and partner with government in contracting, public service provision, and policymaking.

#### P A 510. Intergovernmental Relations in the United States (3)

Prerequisite: Public Administration 310 or 312 or 315.

Constitution, political and administrative characteristics of American federalism, including regionalism, interstate compacts, and grants-in-aid.

#### P A 512. The Metropolitan Area (3)

Prerequisite: Public Administration 310 or 312.

Problems of government and administration arising from population patterns and physical and social structures of metropolitan areas.

#### P A 520. Decision Making in the Urban Community (3)

Prerequisite: Public Administration 310.

Processes of decision making in the management of urban communities.

#### P A 525. The U.S. City Planning Process (3)

Prerequisite: Public Administration 320 or graduate standing.

Description and critique of traditional city planning process; styles and roles of city planner; city planning values and ethics.

#### P A 530. Negotiation and Bargaining in the Public Service (3)

Prerequisite: Public Administration 301.

Specific issues such as strategies, the effects of threat, the physical setting, use of a third-party observer and theories of advocacy. Emphasis on analyzing simulations of the bargaining process and developing effective negotiation skills.

#### P A 531. Governmental Employer-Employee Relations (3)

Prerequisite: Public Administration 330.

Historical development, legal basis, and organizational implications of governmental employer-employee relations; emphasis on California local government.

#### P A 540. Public Administrative Systems Analysis (3)

Prerequisites: Public Administration 301 and a statistics course.

Systems and organization analysis; work standards and units; procedures analysis; administrative planning.

#### P A 550. Budgetary and Financial Administration in the Public Sector (3)

Prerequisite: Public Administration 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)

Prerequisite: Public Administration 301.

Administrative organization and process of selected foreign and American governments. Analysis of the cultural basis of administrative systems.

#### P A 596. Experimental Topics (1-4)

Selected current topics in public administration. May be repeated with new content. 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 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

#### P A 600. Scope of Public Administration (3)

The development of public administration as an academic discipline; a systematic evaluation of the rise and operations of large-scale public bureaucracies.

#### P A 604. Methods of Analysis in Public and Urban Affairs (3)

Prerequisite: Credit or concurrent registration in Public Administration 600.

Research design for problems and cases in public affairs; summarizing and organizing data; methods of projection; sampling theory and application; using census and other secondary data sources.

#### P A 605. Seminar in Research Methods in Public Administration (3)

Prerequisite: Public Administration 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)

Prerequisite: Public Administration 604.

Advanced techniques for analyzing problems in public and urban affairs; emphasis on computer applications.

#### P A 620. Seminar in Management of Urban Governments (3)

Selected problems in the management of urban governments. Maximum credit six units applicable to a master's degree.

#### P A 630. Seminar in Public Personnel Administration (3)

Prerequisite: Public Administration 600.

Analysis of selected problems in personnel administration; special emphasis on organizational development and consultation skills as emerging personnel functions. Maximum credit six units applicable to a master's degree.

#### P A 632. Seminar of Organization Development in the Public Sector (3)

Prerequisite: Public Administration 600.

Organization development theory and practice. Emphasis on organizational diagnosis, intervention theory, team building and process consultation skills as they apply to public sector organizations.

#### P A 633. Collective Bargaining in the Public Sector (3)

Prerequisite: Public Administration 530 or 531.

Simulation of public sector collective bargaining. Students will participate in all facets of the bargaining process including data collection, proposal preparation, formal and informal negotiation, fact finding and mediation. Videotape feedback will be used extensively.

## Public Administration

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### **P A 640. Seminar in Public Administration (3)**

Selected topics. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

### **P A 642. Seminar in Administrative Theory (3)**

Prerequisite: Public Administration 600.

Organization and management; the executive role, decision making; bureaucracy; authority and power; communication and control and organizational system; tactics and strategies in effective management.

### **P A 643. Seminar in Administrative Behavior (3) (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)**

Prerequisite: Public Administration 450.

Economics and politics of the public sector. Theories of public expenditure analysis and revenue generation. Issues of ethics and efficiency in government financial policy.

### **P A 660. Administration and Public Policy Development (3)**

Prerequisite: Public Administration 600.

Social, political and administrative problems involved in governmental program development and change.

### **P A 680. Seminar in Transborder Public Administration and Governance (3)**

Prerequisite: 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 685. Practicum in Border Research (3)**

One lecture and four hours of activity.

Prerequisite: Graduate standing.

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)**

Prerequisite: Graduate standing.

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)**

Prerequisite: 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 791. Readings in Public Administration (3) Cr/NC**

Prerequisites: Public Administration 600 and advancement to candidacy.

Selected readings in the literature of public administration.

### **P A 792. Problem Analysis (3)**

Analytical treatment of selected problems in Public Administration. Review of methods for investigation and reporting of data. Consideration of problems in preparation of projects or thesis.

### **P A 796. Internship in Public Administration (3-12) Cr/NC**

Prerequisite: Consent of instructor.

The 12 units of 796 will be exempt from the University's requirement that courses graded Cr/NC be limited to 30 percent of units for the master's degree.

### **P A 797. Research in Public Administration (3) Cr/NC/RP**

Prerequisite: Consent of director of public affairs.

Research in one of the areas of public administration. Maximum credit six units applicable to a master's degree.

### **P A 798. Special Study (1-3) Cr/NC/RP**

Prerequisite: Consent of staff, to be arranged with the director and instructor.

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

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

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

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

### **P A 799B. Thesis Extension (0) Cr/NC**

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

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

### **P A 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

## **Criminal Justice (CJ) UPPER DIVISION COURSES**

### **CJ 510. Contemporary Issues in Law Enforcement (3)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: Criminal Justice 300.

Present and probable roles of public and private agencies and volunteers in criminal justice. (Formerly numbered Criminal Justice Administration 543.)

### **CJ 550. Study Abroad: Criminal Justice (3)**

Prerequisites: Criminal Justice 301 and upper division standing.

Selected topics in comparative criminal justice. Course taught abroad. May be repeated once with new content. See *Class Schedule* for specific content. Maximum credit six units.

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

Prerequisite: 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)**

Prerequisite: Criminal Justice 301.  
Administrative problems of criminal justice systems. (Formerly numbered Criminal Justice Administration 601.)

**CJ 602. Seminar in Comparative Criminal Justice System (3)**

Prerequisite: 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)**

Prerequisite: Criminal Justice 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)**

Prerequisite: Graduate standing.  
Juvenile justice system in U.S. and throughout the world. Responses to delinquency and youth violence. History and foundations of juvenile court, juvenile justice reforms, context, causes, and correlates of youth violence and gang involvement, including programs and policies designed to address these problems. (Formerly numbered Criminal Justice Administration 605.)

**CJ 696. Selected Topics in Criminal Justice (3)**

Prerequisite: 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)**

Prerequisite: 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**

Prerequisite: Consent of instructor.  
Students will be assigned to various government agencies and will work under joint supervision of agency heads and the course instructor. Participation in staff and internship conferences. Maximum credit twelve units. (Formerly numbered Criminal Justice Administration 796.)

**CJ 797. Research in Criminal Justice (3) Cr/NC/CP**

Prerequisite: 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/CP**

Prerequisite: 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/CP**

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**

Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.  
Registration required in any semester or term following assignment of RP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

**CJ 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.  
Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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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 of School  
Ann de Peyster, Ph.D., Professor of Public Health,  
Associate Director of Development  
Suzanne P. Lindsay, Ph.D., M.P.H., Assistant Professor of Public  
Health, Assistant Director of Public Health Practice

### Epidemiology and Biostatistics

Stephanie Kay Brodine, M.D., Professor of Public Health, Division Head  
Caroline A. Macera, Ph.D., Professor of Public Health  
Thomas E. Novotny, M.D., M.P.H., Professor of Public Health  
Richard A. Shaffer, Ph.D., M.P.H., 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  
Ming Ji, Ph.D., 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 A. Fraga, M.D., Adjunct Associate Professor of Public Health

### Health Management and Policy

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  
Jong-Deuk Baek, Ph.D., Assistant 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

### Health Promotion and Behavioral Science

Gregory A. Talavera, M.D., M.P.H., Professor of Public Health,  
Division Head  
John P. Elder, Ph.D., M.P.H., Distinguished Professor of Public Health  
Melbourne F. Hovell, Ph.D., M.P.H., Distinguished Professor of  
Public Health  
Guadalupe X. Ayala, Ph.D., Associate Professor of Public Health  
Paula M. Usita, Ph.D., Associate Professor of Public Health  
Elva M. Arredondo, Ph.D., Assistant Professor of Public Health  
Hala N. Madanat, Ph.D., Assistant Professor of Public Health

### 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  
Eunha Hoh, 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

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, global health, health behavior with various specialization opportunities (see doctoral program); the M.P.H. is offered with concentrations in the areas of biometry, environmental health, epidemiology, health promotion and behavioral science, health management and policy, and a specialization in global emergency preparedness and response; the M.S. degree is offered with a concentration in the area of toxicology. In addition to these advanced degree programs, the school offers a preventive medicine residency program that prepares qualified physicians to sit for the American Board of Preventive Medicine certification examination. Residents may receive the M.P.H. degree along with completion of this residency program. Finally, the public health faculty directs academic study leading to a Bachelor of Science degree in health science for those undergraduate students interested in 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 management and policy is accredited by the Commission on Accreditation for Health Management Education (CAHME), and the preventive medicine residency program is accredited by the Accrediting Commission for Graduate Medical Education (ACGME).

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 and Behavioral Science:** 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 Management and Policy:** 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.

**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 Three of this bulletin.

## Admission to Master's and Doctoral Study

### Master of Public Health Degree

#### Master of Science Degree in Public Health

Application procedures and deadlines are being revised. Prospective applicants for the Master of Public Health and Master of Science degree programs should go to <http://publichealth.sdsu.edu> to obtain information on application procedures and deadlines.

#### Master of Public Health Degree and Master of Arts Degree in Latin American Studies

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

### Graduate School of Public Health

Applicants seeking admission to the Master of Public Health and Master of Arts degree in Latin American Studies should contact the Graduate School of Public Health requesting appropriate descriptive materials. Detailed application instructions can be obtained from our Web site at <http://publichealth.sdsu.edu>.

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.

### Master of Social Work Degree and Master of Public Health Degree

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

### School of Social Work

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

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

### Graduate School of Public Health

The following materials should be submitted by December 15 for fall semester admission 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 Ph.D. application form, Parts I and II (includes narrative statement),  
<http://publichealth.sdsu.edu/phdapplication.php>;

- (2) Three letters of recommendation;
- (3) Photocopy of GRE scores report;
- (4) Official transcripts (in sealed envelopes) from all colleges and universities attended.

## 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. 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 Four 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 management and policy will substitute Public Health 641 for Public Health 605, and students in health promotion and behavioral science 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; (4) have completed a minimum of three units of Public Health 650; and (5) 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) (SIMS Code: 557301)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete an officially approved course of study of not less than 51 units including: (1) Public Health 601, 602, 603, 604, and 605 (students in health management and policy will substitute Public Health 641 for Public Health 605 and students in health promotion and behavioral science 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 minimum of three and a maximum of 12 units of supervised field placement; and (4) electives selected with the approval of the graduate adviser. In addition, Public Health 797, Research, Public Health 798, Special Study, or Public Health 799A, Thesis, must be included in the program as a capstone experience.

Concentrations in biometry, epidemiology, and health promotion and behavioral science require three units of field placement for the Master of Public Health degree. The concentration in health management and policy and the concentration in environmental health both require six units of field placement.

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**  
(SIMS Code: 557308)

Courses required for the concentration:

- P H 601 Epidemiology (3)
- P H 602 Biostatistics (3)
- P H 603 Behavioral and Social Science in Public Health (3)
- P H 604 Environmental Determinants of Human Health (3)
- P H 605 Health Services Administration (3)
- P H 623 Epidemiological Methods (3)
- P H 627 Advanced Statistical Methods in Public Health (3)
- P H 628 Applications of Multivariate Statistics in Public Health (3)
- P H 650R Required Community Practice (3) Cr/NC

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:

- P H 649 Border and Global Public Health Surveillance (3)
- P H 700A Seminar in Public Health: Epidemiology (3)
- P H 722 Seminar in Clinical Trials (3)
- P H 724 Advanced Methods in Epidemiology (3)
- P H 823 Case-Control Studies (3)
- P H 824 Cohort Studies (3)
- P H 826 Analysis of Case-Control Studies (3)
- P H 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 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**  
(SIMS Code: 557315)

Courses required for the concentration:

- P H 601 Epidemiology (3)
- P H 602 Biostatistics (3)
- P H 603 Behavioral and Social Science in Public Health (3)
- P H 604 Environmental Determinants of Human Health (3)
- P H 605 Health Services Administration (3)
- P H 632 Air Quality (3)
- P H 634 Environmental Protection (3)
- P H 636 Hazardous Waste Management (3)
- P H 638A Principles of Toxicology (3)
- P H 639 Water Quality Investigation (3)
- P H 650R Required Community Practice (3) Cr/NC
- P H 750D Advanced Field Practice: Environmental Health (3) Cr/NC

Prescribed electives: A minimum of six additional units selected with the approval of the adviser from:

- P H 630 Environmental Health Risk Assessment (3)
- P H 635 Environmental and Disaster Medicine (3)
- P H 637 Mechanisms of Toxicity (3)
- P H 700D Seminar in Public Health: Environmental Health (3)
- P H 721 Environmental Epidemiology (3)
- P H 738 Topics in Toxicology (3)
- P H 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**  
(SIMS Code: 557329)

Courses required for the concentration:

- P H 601 Epidemiology (3)
- P H 602 Biostatistics (3)
- P H 603 Behavioral and Social Science in Public Health (3)
- P H 604 Environmental Determinants of Human Health (3)
- P H 605 Health Services Administration (3)
- P H 621 Epidemiology of Infectious Diseases (3)
- P H 622 Epidemiology of Chronic Diseases (3)
- P H 623 Epidemiological Methods (3)
- P H 627 Advanced Statistical Methods in Public Health (3)
- P H 650R Required Community Practice (3) Cr/NC

Prescribed electives: Six units selected from the following public health courses in epidemiology:

- P H 625 Control of Infectious Diseases (3)
- P H 626 International Health Epidemiology Practicum (3)
- P H 628 Applications of Multivariate Statistics in Public Health (3)

- P H 649 Public Health Surveillance (3)
- P H 700A Seminar in Public Health: Epidemiology (3)
- P H 721 Environmental Epidemiology (3)
- P H 722 Seminar in Clinical Trials (3)
- P H 724 Advanced Methods in Epidemiology (3)
- P H 726 HIV/AIDS Epidemiology and Public Health (3)
- P H 823 Case-Control Studies (3)
- P H 824 Cohort Studies (3)

Electives (three units selected with the approval of the concentration faculty): These electives may include any public health course or selections from the following:

- Biology 585
- Nutrition 600, 606, 607, 700
- Statistics 510, 550, 551A, 560, 672, 677

**Specialization in Global Emergency Preparedness and Response**  
(SIMS Code: 557401)

Courses required for the specialization:

- P H 601 Epidemiology (3)
- P H 602 Biostatistics (3)
- P H 603 Behavioral and Social Science in Public Health (3)
- P H 604 Environmental Determinants of Human Health (3)
- P H 605 Health Services Administration (3)
- P H 621 Epidemiology of Infectious Diseases (3)
- P H 624A Emergency Preparedness and Response I (3)
- P H 624B Emergency Preparedness and Response II (3)
- P H 635 Environmental and Disaster Medicine (3)
- P H 649 Border and Global Public Health Surveillance (3)
- P H 650R Field Practice: Required Community Practice (3)
- P H 682 Geographic Information Systems and Public Health Spatial Analysis (3)

H SEC 602 Seminar in Science, Technology, and Homeland Security (3)

- P H 727 Epidemiology of Disasters (3)
- P H 771 Refugee Health (3)
- P H 797 Research (3) Cr/NC/RP

OR

P H 799A Thesis (3) Cr/NC/RP

Prescribed electives: Six units of coursework selected with the approval of the faculty adviser from:

- P H 625 Control of Infectious Diseases (3)
- P H 630 Environmental Health Risk Assessment (3)
- P H 638A Principles of Toxicology (3)
- P H 650H Field Practice: Global Emergency Preparedness and Response (3)
- P H 780 Global Health I (3)

OR

- P H 781 Global Health II (3)
- H SEC 603 Seminar in Emergency Preparedness and Response (3)

**Concentration in  
Health Management and Policy  
(SIMS Code: 557415)**

**Graduate Program in Health Management and Policy  
(CAHME Accredited)**

Courses required for the concentration:

- P H 601 Epidemiology (3)
- P H 602 Biostatistics (3)
- P H 603 Behavioral and Social Science in Public Health (3)
- P H 604 Environmental Determinants of Human Health (3)
- P H 641 Introduction to Health Services (3)
- P H 644 Health Services Organization and Management (3)
- P H 645 Health Economics (3)
- P H 647 Quantitative Methods and Health Data Analysis (3)
- P H 648 Health Policy (3)
- P H 650R Required Community Practice (3) Cr/NC
- P H 742A Health Services Financial Management (3)
- P H 742B Health Insurance and Financing Systems (3)

- P H 747 Quality Improvement and Program Evaluation (3)
- P H 748 Health Services Competitive Strategy and Marketing (3)
- P H 750E Advanced Field Practice: Health Management and Policy (3) Cr/NC
- P H 797 Research (3) Cr/NC/RP  
OR

P H 799A Thesis (3) Cr/NC/RP

Prescribed electives (three 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.

- P H 670 Public Health Law and Ethics (3)
- P H 700E Seminar in Public Health: Health Management and Policy (3)
- P H 743 Hospitals and Ambulatory Health Management (3)
- P H 745 International Health Policy (3)

**Concentration in Health Promotion and  
Behavioral Science  
(SIMS Code: 557343)**

Courses required for the concentration:

- P H 601 Epidemiology (3)
- P H 602 Biostatistics (3)
- P H 604 Environmental Determinants of Human Health (3)
- P H 605 Health Services Administration (3)
- P H 607 Research Methods (3)
- P H 650R Required Community Practice (3) Cr/NC
- P H 661 Theoretical Foundations of Health Promotion (3)
- P H 662 Motivating Health Behavior (3)
- P H 663 Health Promotion Communications Theory and Design (3)
- P H 666 Health Promotion Program Planning and Assessment (3)

Prescribed electives (choose two or more different courses from):

- P H 664 Health, Society and Human Behavior (3)
- P H 667 Prevention and Control of Chronic Diseases (3)
- P H 668 Seminar in Health Promotion Research (3)
- P H 700F Seminar in Public Health: Health Promotion and Behavioral Science (3)
- P H 762 Behavioral Medicine (3)
- P H 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.

**Master of Science Degree  
in Public Health**

**Admission to the Degree Curriculum**

The M.S. degree in Public Health is offered with a concentration in the area of toxicology.

To be considered for admission to this program, a student must have successfully completed an undergraduate degree (BA or BS) in biology, chemistry, engineering, or other basic or applied natural science. The Graduate School of Public Health should be consulted for specific course preparation recommended for the Master of Science program. 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.

Prerequisite courses 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 Four of this bulletin. Students completing the Master of Science degree with a concentration in toxicology must (1) have satisfactorily completed at least 12 units of coursework of the 36-unit official program to include at least two courses chosen from the list of courses required 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) (SIMS Code: 557302)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete an officially approved course of study of not less than 36 units as listed below. Up to six units may be accepted in transfer, with the approval of the graduate adviser. Requirements are as shown below:

	<b>Toxicology</b>
Required	15
Prescribed electives	15
Field Practice*	—
P H 797 (Research)	3
P H 799A (Thesis)	3
	—
Total units:	36

\* A 3-unit field practice may be taken as an elective by students with approval of the academic adviser.

## Specific Requirements for Master of Science Degree Programs

### Concentration in Toxicology (SIMS Code: 557395)

Prerequisite courses (6 units):

P H 601 Epidemiology (3)

P H 602 Biostatistics (3)

Courses required for the concentration (15 units):

P H 630 Environmental Health Risk Assessment (3)

P H 637 Mechanisms of Toxicity (3)

P H 638A Principles of Toxicology (3)

P H 638B Methods in Toxicity Testing (3)

P H 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.

P H 603 Behavioral and Social Science in Public Health (3)

P H 604 Environmental Determinants of Human Health (3)

P H 627 Advanced Statistical Methods in Public Health (3)

P H 632 Air Quality (3)

P H 635 Environmental and Disaster Medicine (3)

P H 636 Hazardous Waste Management (3)

P H 639 Water Quality Investigation (3)

P H 650D Field Practice: Environmental Health (3) Cr/NC

P H 700D Seminar in Public Health: Environmental Health (3)

P H 721 Environmental Epidemiology (3)

P H 798 Special Study (1-3) Cr/NC/RP

In special circumstances, the graduate adviser may approve one course not on the list of prescribed electives. The substitution must be approved prior to enrollment in the course.

## Master of 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 Behavioral Science 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 Four 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.

## Public Health

### Specific Requirements for the MPH/MA Degree

(Major Code: 12141/03081) (SIMS Code: 997310)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete an officially approved course of study of not less than 63 units as listed below.

#### General Requirements

Total General Units = 39

Core Courses (15 units)	Prescribed Electives (18 units from at least two departments)	Culminating Experience (6 units)		
P H 601 (3)	ANTH 508 (3)	LATAM 560 (3)	POL S 667 (3)	P H 797 or LATAM 797 (3)
P H 602 (3)	ANTH 520 (3)	LATAM 580 (3)	POL S 696 (3)	P H 799A or LATAM 799A (3)
P H 604 (3)	ANTH 529 (3)	LATAM 696 (3)	SOC 555 (3)	
P H 605 (3)	ANTH 583 (3)	LATAM 700 (3)	SOC 730 (3)	
LATAM 601 (3)	ANTH 603 (3)	LATAM 798 (3)	SOC 740 (3)	
	HIST 551 (3)	POL S 555 (3)	WMNST 512 (3)	
	HIST 640 (3)	POL S 568 (3)	WMNST 565 (3)	
		POL S 655 (3)	WMNST 580 (3)	
		POL S 661 (3)	WMNST 605 (3)	

#### Public Health Concentration Requirements

Total Units = 24

(Students must complete one of the following concentrations)

##### Epidemiology Concentration (SIMS Code: 997311)

Total Epidemiology Units = 24

##### Required Courses (15 units)

P H 603 (3)  
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 724 (3)  
P H 628 (3) P H 726 (3)  
P H 649 (3) P H 823 (3)  
P H 700A (3) P H 824 (3)  
P H 721 (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 and Behavioral Science Concentration (SIMS Code: 997312)

Total Health Promotion and Behavioral Science  
Units = 24

##### 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 (6 units)

P H 664 (3)  
P H 667 (3)  
P H 668 (3)  
P H 700F (3)  
P H 721 (3)  
P H 762 (3)

##### Electives (3 units)

Three units to be selected with the  
approval of the faculty advisory  
committee.

##### Environmental Health Concentration (SIMS Code: 997313)

Total Environmental Health Units = 24

##### Required Courses (18 units)

P H 603 (3)  
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 721 (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 Four 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

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 Four 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) (SIMS Code: 998210)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete an officially approved course of study of not less than 90 units.

#### Social Work/Public Health – Health Management and Policy (SIMS Code: 998220)

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 740	Advanced Seminar in Social Work Administration and Community Development (3)
SWORK 745	Advanced Seminar in Selected Topics in Social Work Administration (3)
SWORK 755*	Advanced Field Practicum: Social Work Administration and Community Development (8) Cr/NC/RP
SWORK 797	Research (3) Cr/NC/RP
P H 601	Epidemiology (3)
P H 602	Biostatistics (3)
P H 604	Environmental Determinants of Human Health (3)
P H 641	Introduction to Health Services (3)
P H 644	Health Services Organization and Management (3)
P H 645	Health Economics (3)
P H 647	Quantitative Methods and Health Data Analysis (3)
P H 648	Health Policy (3)
P H 742A	Health Services Financial Management (3)
P H 742B	Health Insurance and Financing Systems (3)
P H 747	Quality Improvement and Program Evaluation (3)
P H 748	Health Services Competitive Strategy and Marketing (3)
P H 797	Research (3) Cr/NC/RP
P H 799A or	Thesis (3) Cr/NC/RP
SWORK 799A	Thesis (3) Cr/NC/RP

Electives: Three units of social work electives.

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 755 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 behavior.

### Ph.D. in Public Health with a Concentration in Epidemiology (Major Code: 12141) (SIMS Code: 557329)

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, global health, 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) (SIMS Code: 557411)

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 Behavior

(Major Code: 12143) (SIMS Code: 557321)

A Ph.D. in public health with a concentration in health behavior is offered by the joint faculties of the Division of Health Promotion and Behavioral Science, 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 behavior change theory and practice; 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; and to establish skills necessary to understand and change health policy. 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 an area related to the concentration 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, 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 are required to take the following additional courses: Public Health 601, 607, 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, environmental health, health promotion and behavioral science, health management and policy, 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

(Major Code: 90024) (SIMS Code: 555501)

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.

## **Courses Acceptable on Master's and Doctoral Degree Programs (P H)**

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### **GRADUATE COURSES**

#### **P H 601. Epidemiology (3)**

Prerequisite: Consent of instructor.

Distribution and determinants of diseases; role of epidemiology in public health. Descriptive, analytic and experimental epidemiology.

#### **P H 602. Biostatistics (3)**

Prerequisite: Consent of instructor.

Statistical reasoning applied to public health; probability, hypothesis testing, regression and correlation, analysis of variance, measurement theory and modeling.

#### **P H 603. Behavioral and Social Science in Public Health (3)**

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 (3)**

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 (3)**

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 (3)**

Two lectures and three hours of laboratory.

Prerequisites: Public Health 601, 661, and consent of instructor. Recommended: Public Health 602.

Direct observation measurement, group and intensive experimental designs. Laboratory exercises and proposal writing applicable to public health.

#### **P H 621. Epidemiology of Infectious Diseases (3)**

Prerequisite: Public Health 601.

Utilizing selected infectious diseases and environmental settings, provides scientific background on which epidemiological investigations and control measures are based.

#### **P H 622. Epidemiology of Chronic Diseases (3)**

Prerequisite: Public Health 601.

Epidemiology of selected chronic diseases.

#### **P H 623. Epidemiological Methods (3)**

Prerequisites: Public Health 602, 621 or 622.

Topics include: analysis of descriptive data, design of studies, evaluation of data, development of biological models. Examples of both acute and chronic diseases.

#### **P H 624A. Emergency Preparedness and Response I (3)**

Prerequisite: Classified graduate standing.

Dynamics of natural and man-made disaster management to include planning, organization, management of relief services, and emergency service organizations. Prevention, mitigation, and response to emergency situations, both nationally and internationally.

#### **P H 624B. Emergency Preparedness and Response II (3)**

Prerequisite: Public Health 624A.

Terrorism, emergency management, incident command, and communications. Examine policy, legal, social, and psychological implications of disasters.

#### **P H 625. Control of Infectious Diseases (3)**

Prerequisite: Public Health 621.

Theoretical and practical experience in techniques available for control of infectious diseases.

#### **P H 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)**

Prerequisite: Public Health 602.

Applications of advanced statistical methods for analysis of public health and biomedical data. Topics include multiple linear regression, analysis of variance, logistic regression, and introduction to survival analysis.

#### **P H 628. Applications of Multivariate Statistics in Public Health (3)**

Prerequisite: Public Health 627.

Statistical methods for multivariate problems in public health including regression diagnostics, cluster analysis, discriminant analysis, principal components, multivariate discrete analysis and Poisson regression. Computer applications included.

#### **P H 630. Environmental Health Risk Assessment (3)**

Four major steps of risk assessment to include hazard identification, dose-response assessment, exposure assessment, and risk characterization. Will also include risk communication and risk management in environmental arena.

#### **P H 632. Air Quality (3)**

Prerequisites: Biology 100, Chemistry 251, Physics 180A.

Properties of airborne gases, vapors, and particulate matter. Effects of air pollution on community. Mobile and stationary sources of air pollution. Meteorology and dispersion of air pollutants. Ambient air quality standards.

#### **P H 634. Environmental Protection (3)**

Rationale and mechanisms for control of 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)**

Prerequisite: Chemistry 201.

Rationale, methods, and regulations governing the proper management of hazardous and toxic wastes.

**P H 637. Mechanism of Toxicity (3)**

Prerequisites: Biology 261 and Chemistry 160.

Biologic effects and underlying mechanisms of action of harmful environmental agents on mammalian cells and tissues. Emphasis on toxic chemicals and applications of basic mechanisms research to public health situations.

**P H 638A. Principles of Toxicology (3)**

Prerequisites: Biology 261 and Chemistry 160.

Dose-response and other principles for evaluating the effects of toxic chemicals on mammalian organ systems.

**P H 638B. Methods in Toxicity Testing (3)**

One lecture and six hours of laboratory.

Prerequisite: Credit or concurrent registration in Public Health 638A.

Laboratory methods used in evaluating chemicals for potential human toxicity.

**P H 639. Water Quality Investigation (3)**

Two lectures and three hours of laboratory.

Prerequisite: Public Health 604 or 634.

Human health problems associated with water usage and with various aquatic environments.

**P H 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)**

Prerequisite: 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 health care organizations, focusing on interpersonal, informational, decision, ethical, and conflict resolution roles.

**P H 645. Health Economics (3)**

Prerequisite: Public Health 641.

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.

**P H 648. Health Policy (3)**

Prerequisite: 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. Border and Global 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
- B. Biometry
- D. Environmental Health
- E. Health Management and Policy
- F. Health Promotion and Behavioral Science
- H. Global Emergency Preparedness and Response
- R. Required Community Practice

**P H 661. Theoretical Foundations of Health Promotion (3)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: Graduate standing in public health.

Philosophical, ethical and methodological issues in current health promotion research and services.

**P H 669. Health Risk Appraisal (3)**

Prerequisites: Public Health 601, 602, 661, 662.

Techniques available for identifying personal health risk. Use of these methods for inducing change. Evaluation of effectiveness of methodologies.

**P H 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
- B. Biometry
- D. Environmental Health
- E. Health Management and Policy
- F. Health Promotion and Behavioral Science
- G. Preventive Medicine
- H. Global Emergency Preparedness and Response

### **P H 721. Environmental Epidemiology (3)**

Prerequisites: Public Health 601 and 602. Recommended: Public Health 623.

Uses of epidemiological methods in study of environmental hazards affecting community health and health of workers. Case studies.

### **P H 722. Seminar in Clinical Trials (3)**

Prerequisites: Public Health 601 and 602. Recommended: Public Health 627.

Public health perspective on current methodological issues in clinical trials to include study design, concepts of controls, masking, randomization, monitoring, data analysis procedures, and reporting of results.

### **P H 724. Advanced Methods in Epidemiology (3)**

Prerequisites: Public Health 601, 623, and 627.

In-depth methodological issues in performance and interpretation of epidemiologic studies. Study design, cluster analysis, effect modification, accuracy and precision, adjustment of attributable risk, life tables, Kaplan-Meier, Cox proportional hazards modeling, and meta-analysis.

### **P H 726. HIV/AIDS Epidemiology and Public Health (3)**

Prerequisite: Public Health 601. Recommended: Public Health 621.

State-of-the-art review of HIV and AIDS within a public health framework. Biology, transmission, host susceptibility, screening and surveillance, domestic and international epidemiology, study design, intervention, and options for prevention (including community-based trials).

### **P H 727. Epidemiology of Disasters (3)**

Prerequisites: Public Health 601 and 602.

Assessment of health effects of disasters. Data collection to include modern information technology, reporting systems, and techniques of statistical sampling. Risk factors for adverse health effects. Baseline data for measuring trends. Limitations of methods used for disaster assessment.

### **P H 738. Topics in Toxicology (3)**

Prerequisite: Public Health 638A.

Topics in toxicology to include food toxicants, pesticides, soil and groundwater pollutants, industrial toxicology and quality assurance, toxicokinetics, genetic toxicology and toxicology in risk assessment.

### **P H 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)**

Prerequisite: 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)**

Prerequisite: Public Health 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)**

Prerequisite: 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.

### **P H 748. Health Services Competitive Strategy and Marketing (3)**

Prerequisite: 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.

Field instruction in public health setting. 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
- B. Biometry
- D. Environmental Health
- E. Health Management and Policy
- F. Health Promotion and Behavioral Science

### **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 771. Refugee Health (3) Cr/NC**

Prerequisites: Public Health 601 and 602.

Refugee movements to include economic, political, ethical considerations in management and repatriation of refugees. Public organization of refugee camps. International legal and regulatory issues. Targeted programs to promote health and security.

### **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)**

Prerequisite: Public Health 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**

Prerequisite: Consent of instructor.

Research in one of the fields of public health. Maximum credit six units applicable to a master's degree. Maximum combined credit six units of Public Health 797 and 798 applicable to a master's degree.

**P H 798. Special Study (1-6) Cr/NC/RP**

Prerequisite: Consent of staff, to be arranged with the director and instructor.

Individual study. Maximum credit six units applicable to a master's degree. Maximum combined credit six units of Public Health 797 and 798 applicable to a master's degree.

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

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**

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

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

**P H 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

**DOCTORAL COURSES****P H 800. Seminar (1-9)**

Prerequisite: Admission to the doctoral program.

Investigation of a particular topic or issue, emphasis on empirical research; topic to be announced in the *Class Schedule*. Maximum credit nine units applicable to a doctoral degree.

**P H 823. Case-Control Studies (3)**

Prerequisites: Public Health 601, 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, 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)**

Prerequisite: 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**

Prerequisite: Admission to the doctoral program.

Independent investigation in the general field of the dissertation.

**P H 898. Doctoral Special Study (1-9) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Individual study in the field of specialization. Maximum credit nine units applicable to the doctoral degree.

**P H 899. Doctoral Dissertation (3-15) Cr/NC/RP**

Prerequisites: An officially constituted dissertation committee and advancement to candidacy.

Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.

# Regulatory Affairs

In the Center for Bio/Pharmaceutical and Biodevice Development  
and the College of Sciences

**OFFICE: Geology/Mathematics/Computer Science 629**

**TELEPHONE: 619-594-0138 / FAX: 619-594-6381**

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

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

**Graduate Adviser: Catherine J. Atkins, Ph.D.**

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

\*E. Dale Sevier, Ph.D., Director of the 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 Bio/Pharmaceutical 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>.

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) English language 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 Four of this bulletin.

## Specific Requirements for the Master of Science Degree

**(Major Code: 49045) (SIMS Code: 779901)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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.
  - R A 601 Pharmaceutical, Biotechnology, and Medical Device Industries (3)
  - R A 602 Food and Drug Law (3)
  - R A 605 Medical/Scientific Writing for Healthcare Professionals (3)
  - R A 705 Project Planning for the Biomedical Industries (3)
  - R A 750 Quality Improvement Management (3)
  - R A 770 Current Good Manufacturing Practices – General Concepts (3)
  - R A 774 Investigational and Marketing Applications for Drugs, Biologics, and Medical Devices (3)
  - R A 783 Effective Communication for Healthcare Professionals (3)
- Complete 12 units of electives from the following courses.
  - R A 696 Advanced Topics in Regulatory Affairs (1-4)
  - R A 771 Current Good Manufacturing Practices – Advanced Topics (3)
  - R A 773 Medical Device Regulations (3)
  - R A 775 Clinical Trials: Issues in Design, Conduct, and Evaluation (3)
  - R A 776 Validation Aspects of Drugs, Biologics, and Device Product Development and Manufacturing, Including Computer Related Systems and Software (3)
  - R A 778 Quality Control and Quality Assurance: Pharmaceutical, Biologics, and Medical Devices (3)
  - R A 779 International Regulatory Affairs (3)
  - R A 781 Ethics for Healthcare Professionals (3)
  - R A 797 Research (1-3) Cr/NC/RP
  - R A 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.

## 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 Four of this bulletin, the student must complete 37 semester units including the Advanced Certificate in Regulatory Affairs at California State University, East Bay. In addition, the student must also complete a minimum of 27 units as follows:

- Complete 15 units of required courses.
  - R A 605 Medical/Scientific Writing for Healthcare Professionals (3)
  - R A 705 Project Planning for the Biomedical Industries (3)
  - R A 750 Quality Improvement Management (3)
  - R A 774 Investigational and Marketing Applications for Drugs, Biologics, and Medical Devices (3)
  - R A 783 Effective Communication for Healthcare Professionals (3)
- Complete 12 to 15 units of electives selected from:
  - R A 696 Advanced Topics in Regulatory Affairs (1-4)
  - R A 771 Current Good Manufacturing Practices – Advanced Topics (3)
  - R A 773 Medical Device Regulations (3)
  - R A 775 Clinical Trials: Issues in Design, Conduct, and Evaluation (3)
  - R A 776 Validation Aspects of Drugs, Biologics, and Device Product Development and Manufacturing, Including Computer Related Systems and Software (3)
  - R A 778 Quality Control and Quality Assurance: Pharmaceutical, Biologics, and Medical Devices (3)
  - R A 779 International Regulatory Affairs (3)
  - R A 781 Ethics for Healthcare Professionals (3)
  - R A 797 Research (1-3) Cr/NC/RP
  - R A 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)**

**(Major Code: 90701) (SIMS Code: 779902)**

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.

## Courses Acceptable on Master's Degree Program in Regulatory Affairs (R A)

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### GRADUATE COURSES

#### R A 601. Pharmaceutical, Biotechnology, and Medical Device Industries (3)

Prerequisite: 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)

Prerequisite: Regulatory Affairs 601.

Laws governing drug, biological, and medical device products. Discussion of Federal Food, Drug, and Cosmetic Act, U.S. Public Health Service Act, Title 21 Code of Federal Regulations, and various amendments.

## Regulatory Affairs

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### **R A 605. Medical/Scientific Writing for Healthcare Professionals (3)**

Prerequisite: Regulatory Affairs 601.

Writing for development of a new drug or biologic. Emphasis on effective writing of project reviews, research, reports, protocols, and CTDs.

### **R A 696. Advanced Topics in Regulatory Affairs (1-4)**

Prerequisite: Regulatory Affairs 602.

Selected topics in regulatory affairs. May be repeated with new content. See *Class Schedule* for specific content. 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)**

Prerequisite: Regulatory Affairs 601.

Complexity of biomedical product development. Projects and strategies for effectively planning and managing them. Understanding and utilization of management and planning strategies as applied to these biomedical product development projects. Strategies for planning, scheduling, and effective management of regulatory affairs activities and related tasks associated with development of a biomedical product.

### **R A 750. Quality Improvement Management (3)**

Prerequisite: Regulatory Affairs 602.

Controlling and facilitating change. Traditional quality tools and process improvement methods applied to biotechnology industry to create strong relationships with management and peers, communicate financial returns from a quality initiative, and selling benefits in a consultative manner.

### **R A 770. Current Good Manufacturing Practices - General Concepts (3)**

Prerequisite: Regulatory Affairs 602.

Current Good Manufacturing Practice regulations to assure quality of marketed products. Application to manufacturer's organization, personnel, facilities, equipment, control systems, production, process controls, laboratory procedures and records.

### **R A 771. Current Good Manufacturing Practices - Advanced Topics (3)**

Prerequisite: Regulatory Affairs 770.

Expanded analysis of current Good Manufacturing Practice regulations to assure quality of marketed drug and biological products. Discussions of FDA methods of enforcement by inspections of manufacturing establishments.

### **R A 773. Medical Device Regulations (3)**

Prerequisite: Regulatory Affairs 602.

Laws and FDA regulations for medical devices, in vitro diagnostics, radiological devices, FDA jurisdiction, registration, listing labeling requirements, classification, Investigational Device Exemptions (IDE), premarket approval (PMA) and premarket notification (510(R)).

### **R A 774. Investigational and Marketing Applications for Drugs, Biologics, and Medical Devices (3)**

Prerequisite: Regulatory Affairs 602.

Development and informational content for investigational new drug applications (IND), investigational device exemptions (IDE), new drug applications (NDA), product license applications (PLA), and biologics license applications (BLA) for FDA review.

### **R A 775. Clinical Trials: Issues in Design, Conduct, and Evaluation (3)**

Prerequisite: Regulatory Affairs 602.

Issues and requirements in design, conduct, and evaluation of clinical trials for new drugs, biologics, and medical devices. Introduction to biostatistics.

### **R A 776. Validation Aspects of Drugs, Biologics, and Device Product Development and Manufacturing, Including Computer Related Systems and Software (3)**

Prerequisite: Regulatory Affairs 602.

Verification and validation of computer hardware, software, and peripherals for applications in pharmaceutical, biologic, and medical device industries.

### **R A 778. Quality Control and Quality Assurance: Pharmaceuticals, Biologics, and Medical Devices (3)**

Prerequisite: Regulatory Affairs 602.

Review requirements, procedures, controls, and documentation for quality control and assurance in manufacture and commercial distribution of drugs, biologics, and medical devices.

### **R A 779. International Regulatory Affairs (3)**

Prerequisite: Regulatory Affairs 602.

International medical device regulations pertaining to pharmaceuticals, biologics, and devices. Emphasis on European union and other appropriate areas of the world.

### **R A 781. Ethics for Healthcare Professionals (3)**

Prerequisite: 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)**

Prerequisite: 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**

Prerequisite: Advancement to candidacy.

Research in the area of regulatory sciences. Maximum credit six units applicable to a master's degree.

### **R A 798. Special Study (1-3) Cr/NC/RP**

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

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

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

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**

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

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

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# Religious Studies

In the College of Arts and Letters

**OFFICE: 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

Risa Levitt, Ph.D., Professor of Religious Studies, Chair of Department  
Christopher Frost, Ph.D., Professor of Religious Studies and  
Associate Dean of the Division of Undergraduate Studies  
Rebecca E. Moore, Ph.D., Distinguished Professor of  
Religious Studies  
Wilburn N. Hansen, Ph.D., Associate Professor of Religious Studies  
Khaleel Mohammed, Ph.D., Associate Professor of Religious Studies  
Sthaneshwar Timalina, Ph.D., Associate 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.

## Courses (REL S)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### UPPER DIVISION COURSES

#### **REL S 507. The Reformation (3)** **(Same course as History 507)**

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.

#### **REL S 580. Major Figure (3)**

Prerequisite: Three units of religious studies.

Life, works, and significance of one major figure in a religious tradition. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units.

#### **REL S 581. Major Theme (3)**

Prerequisites: Three units of religious studies and upper division or graduate standing.

Advanced systematic study of a theme or motif selected from major religious traditions. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units.

#### **REL S 582. Major Text (1-3)**

Prerequisites: Three units of religious studies and upper division or graduate standing.

Advanced systematic study of a selected scripture or classic text(s) selected from one of the major religious traditions. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units.

#### **REL S 583. Major Tradition (3)**

Prerequisites: Three units of religious studies and upper division or graduate standing.

Advanced systematic study of the doctrines, practices, and development of a major religious tradition. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units.

#### **REL S 596. Advanced Topics in Religious Studies (1-3)**

Prerequisite: Consent of instructor.

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

Prerequisite: Twelve upper division units in religious studies.

Directed research in a major problem or movement in religious studies. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree. 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.

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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, Emeritus, 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 graduate program can prepare students for a teaching career.

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 1 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) English language 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 Four 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 Four 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 (SIMS Code: 112201)

**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 (SIMS Code: 112202)

**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 (SIMS Code: 112203)

**Required courses** (24 units):

RWS 504	Advanced Professional Writing (3)
RWS 505	Writing Project Management (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 (3) Cr/NC/RP (Based on work experience, where appropriate and with the approval of the Department of Rhetoric and Writing Studies graduate adviser.)
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

(Major Code: 90101) (SIMS Code: 112299)

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** (6 units):

RWS 600	Reading and Writing Rhetorically (3)
RWS 509	Teaching Composition in Secondary Schools (3)

or

RWS 609	Theory and Practice of Teaching Composition (3)
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**Electives** (6 units)

Three units selected from:

LING 530	English Grammar (3)
LING 550	Theory and Practice of English as a Second Language (3)

LING 652	Second Language Acquisition (3)
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LING 653	ESL Reading and Writing (3)
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Three units selected from:

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)

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.

## Courses Acceptable on Master's Degree Program in Rhetoric and Writing Studies (RWS)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### UPPER DIVISION COURSES

#### RWS 500W. Advanced Writing Strategies (3)

Prerequisites: Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units; completed Writing Placement 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)

Prerequisite: 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 503W. 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 503.)

### **RWS 504. Advanced Professional Writing (3)**

Prerequisite: Rhetoric and Writing Studies 503W. 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)**

Prerequisite: Rhetoric and Writing Studies 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)**

Prerequisite: Rhetoric and Writing Studies 503W.

Developing specific technical communication skills for nonprofit organizations. Learning nonprofit documentation: proposals, mission statements, advertising, member surveys, capital campaigns. Promoting volunteerism. Interacting with nonprofit boards. Adhering to requisite state and federal regulations.

### **RWS 508W. Scientific Writing (3)**

Prerequisites: Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units; completed Writing Placement 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.

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)**

Prerequisite: 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 512. Writing Tutor Theory and Practice (3)**

Prerequisite: Satisfaction of Graduation Writing Assessment Requirement.

Theory, practice, and methods of tutoring written composition in post-secondary settings, to include various approaches to one-on-one student conferencing and responding to student writing. Maximum credit six units.

### **RWS 596. Special Topics in Rhetoric and Writing Studies (1-3)**

Prerequisite: Consent of instructor.

Selected topics in rhetoric and writing studies. May be repeated with new content and consent of instructor. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. 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)**

Prerequisite: Good standing in an approved graduate program.

Major works of rhetoric from Greek Sophists through Imperial Rome. Themes and core concepts that shape the discipline of rhetoric. How the works informed pedagogy and public life. Relationship of historical texts to contemporary rhetorical practices.

### **RWS 601B. History of Rhetoric II (3)**

Prerequisite: Good standing in an approved graduate program.

Major works of rhetoric from medieval period through the nineteenth century. Themes and core concepts that shape the discipline. How these works informed pedagogy and public life. Relationship of historical texts to contemporary rhetorical practices. Not open to students who have taken Rhetoric and Writing Studies 601.

### **RWS 602. Modern Rhetoric and Composition Studies (3)**

Twentieth century rhetoric and composition theory, and their relationship to study and teaching of written discourse.

### **RWS 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 744. Seminar in Issues in Rhetorical Theory and Practice (3)**

Prerequisites: Rhetoric and Writing Studies 600, 601A, 602.

Problems in teaching of rhetoric and writing, both practical and theoretical. Advanced study of topics such as teaching practices, genres, stylistics, or a major figure. May be repeated with new content. Maximum credit six units.

**RWS 750. 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, 504, 600, 601A, 602, and consent of graduate director.

Intensive experience in writing and editing documents while student is under joint supervision of an academic instructor and a professional coordinator. Maximum credit three units applicable to a master's degree.

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

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

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

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

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

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

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

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

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

**RWS 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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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: Anne Donadey, Ph.D.**

## 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.

## Courses (RUSSN)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

### UPPER DIVISION COURSES

**NOTE: All upper division courses in Russian are taught in Russian unless otherwise stated.**

#### **RUSSN 501. Translation (3)**

Prerequisite: Russian 301.

Comparison of Russian and English through translation of a variety of texts from Russian to English and from English to Russian.

#### **RUSSN 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)**

Prerequisite: Russian 305B (for literary topics). **Proof of completion of prerequisite required:** Copy of transcript.

Topics in Russian language, literature, or linguistics. May be repeated with new content. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. 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.

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# Social Work

In the College of Health and Human Services

**OFFICE: Hepner Hall 119**  
**TELEPHONE: (619) 594-6865**

Accredited by the Council on Social Work Education.

## Faculty

Thom Reilly, D.P.A., Professor of Social Work,  
Director of School  
Daniel J. Finnegan, Ph.D., Associate Professor of Social Work,  
Associate Director of School  
John D. Clapp, 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  
Susan I. Woodruff, Ph.D., Professor of Social Work  
David W. Engstrom, 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)  
Eunjeong Ko, Ph.D., Assistant Professor of Social Work  
Yawen Li, Ph.D., Assistant Professor of Social Work  
Mark B. Reed, Ph.D., Assistant Professor of Social Work

## 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) English language 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 degree is to prepare advanced practitioners who: are prepared to be leaders in the profession; who have multiple skills that can be used in a wide variety of settings and with systems of various sizes; who are well-grounded in the values and ethics of the profession; who are committed to social and economic justice; who utilize research evidence in practice decision making; who understand and can respond to the dynamic nature of the social contexts of practice; and who are committed to life long professional development. 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 for Alcohol and Other Drug Studies 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 English language 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 Four 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 750 or 755; (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 Four 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) (SIMS Code: 558201)

#### Advanced Standing Program

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree in Part Four 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 and Community Development).

Direct Practice (SIMS Code: 558207)	OR	Administration and Community Development (SIMS Code: 558206)
SWORK 739 (3)		SWORK 720 (3)
SWORK 744 (3)		SWORK 740 (3)
SWORK 750 (8)		SWORK 755 (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 Four 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 and Community Development).

<p><b>Direct Practice (SIMS Code: 558205)</b></p> <p>SWORK 739 (3) SWORK 744 (3) SWORK 750 (8)</p>	<p><b>OR</b></p> <p><b>Administration and Community Development (SIMS Code: 558204)</b></p> <p>SWORK 720 (3) SWORK 740 (3) SWORK 755 (8)</p>
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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 and Community Development

Focus is on designing and managing human service organizations, engaging communities, forming partnerships, building institutional relationships, and enhancing social capital. Areas of emphasis include Administration (financial management, information systems, leadership, organizational change, supervision) or Community Development (community organizing, neighborhood improvement and problem solving, international social work, immigration issues). Electives must be approved by the adviser.

##### 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 Four 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) (SIMS Code: 558280)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin and all the 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	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.

## Social Work

<p><b>Direct Practice (SIMS Code: 558208)</b></p> <p>SWORK 739 (3) SWORK 744 (3) SWORK 750 (8)</p>	<p><b>OR</b></p>	<p><b>Administration and Community Development (SIMS Code: 558209)</b></p> <p>SWORK 720 (3) SWORK 740 (3) SWORK 755 (8)</p>
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**California Western School of Law  
(89 Units—Including 12 units transferred from  
the School of Social Work)**

Civil Procedures I and II (6)  
Contracts I and II (6)  
Criminal Law I (3)  
Legal Skills I and II (4)  
Property I and II (6)  
Torts I and II (6)  
Constitutional Law II (3)  
Criminal Procedure I (3)  
Evidence (4)  
Professional Responsibility (2)  
Interdisciplinary Program for Child Abuse and Neglect (6)  
Independent Study (3)  
Internship (5)  
Electives: 32 units (includes 12 units from SDSU)

The specific sequence of courses over the four year period is listed in the admissions material. Students attend the schools in the following pattern:

Year 1 California Western School of Law only  
Year 2 San Diego State University School of Social Work only  
Year 3 (Fall) Both Schools  
Year 3 (Spring) California Western School of Law only  
Year 4 Both Schools

### Master of Social Work 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 Four 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) (SIMS Code: 998210)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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 Management and Policy (SIMS Code: 998220)

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 740	Advanced Seminar in Social Work Administration and Community Development (3)
SWORK 745	Advanced Seminar in Selected Topics in Social Work Administration (3)
SWORK 755*	Advanced Field Practicum: Social Work Administration and Community Development (8) Cr/NC/RP
SWORK 797	Research (3) Cr/NC/RP
P H 601	Epidemiology (3)
P H 602	Biostatistics (3)
P H 604	Environmental Determinants of Human Health (3)
P H 641	Introduction to Health Services (3)
P H 644	Health Services Organization and Management (3)
P H 645	Health Economics (3)
P H 647	Quantitative Methods and Health Data Analysis (3)
P H 648	Health Policy (3)
P H 742A	Health Services Financial Management (3)
P H 742B	Health Insurance and Financing Systems (3)
P H 747	Quality Improvement and Program Evaluation (3)
P H 748	Health Services Competitive Strategy and Marketing (3)
P H 797	Research (3) Cr/NC/RP
P H 799A or	Thesis (3) Cr/NC/RP
SWORK 799A	Thesis (3) Cr/NC/RP
Electives: Three units of social work electives.	

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 755 must have the approval of the faculty advisory committee. Responsibility for faculty field supervision will be assigned in social work.



## Certificate in Social Work Administration

(Major Code: 90055) (SIMS Code: 558220)

Offered by the School of Social Work, the Advanced Certificate in Social Work Administration provides the following objectives:

- Enhance the skills and career prospects for students with a Master of Social Work degree who have moved into, or are interested in moving into, administrative positions in human service organizations;
- Enhance the talent pools for human service organizations that prefer managers and leaders with knowledge and skills in administrative practice and a strong grounding in clinical or direct practice service delivery;
- Contribute to increasing effectiveness of human service organizations in both client outcomes and management capacity.

Applicants to this program must possess a Master of Social Work in Clinical or Direct Practice. Applicants with other master's degrees in human services field may be considered on a case-by-case basis.

The following courses must be completed with a grade point average of 3.0 or above:

- SWORK 740 Advanced Seminar in Social Work Administration (3)  
 SWORK 745 Advanced Seminar in Selected Topics in Social Work Administration (3)  
 SWORK 758 Seminar in Social Work and Selected Fields of Practice: Information Systems and Knowledge Management (3)  
 SWORK 758 Seminar in Social Work and Selected Fields of Practice: Financial Management and Resource Development (3)

Up to 12 units of completed certificate courses with a grade of B or better may be applicable to the Master of Social Work degree with the approval of the graduate adviser.

For further information, contact the program adviser, Dr. Thomas R. Packard, School of Social Work, [tpackard@mail.sdsu.edu](mailto:tpackard@mail.sdsu.edu) or 619-594-6723.

## 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 750 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 750 (4 units) each semester. SWORK 750 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 750 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).

## Courses Acceptable on Master's Degree Programs in Social Work (SWORK)

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### 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)

Social welfare as a social institution; philosophical, historical, and comparative analysis of the welfare functions, issues and problems in both policy and program development, implementation, and evaluation.

#### SWORK 610. Computer Application in Social Work Practice (3)

Prerequisite: Social Work 690.

Computer technology in social work practice with emphasis on clinical and administrative applications, program monitoring, and support of service provision and delivery.

#### SWORK 619. Human Behavior in the Social Environment (3)

Conceptual framework to view and interpret behavior and to understand functioning of individuals, families, groups, organizations, and communities within ecological systems.

#### SWORK 620. Seminar in Human Behavior and Social Environment (3)

Prerequisite: Social Work 619.

Human behavior theories and concepts appropriate to a methods concentration.

##### A. Direct Practice

#### SWORK 630. Social Work Practice: A Generalist Perspective (3)

Prerequisite: Concurrent registration in Social Work 650.

Overview of generalist social work practice as a method and process. Generalist social work presented as a basic helping approach used to assist individuals, groups, families, organizations, and communities to achieve personal and social change.

#### SWORK 631. Social Work Practice: Individuals, Families, and Groups (3)

Prerequisites: Social Work 630 and concurrent registration in Social Work 650.

Preparation for direct intervention with individuals, families, and groups.

#### SWORK 632. Social Work Practice: Organizations and Communities (3)

Prerequisites: Social Work 630 and concurrent registration in Social Work 650.

Theoretical knowledge of elementary organizational and interorganizational decision making in human service programs.

#### SWORK 650. Field Practicum (3-8) Cr/NC

Field instruction in public or voluntary social work setting. Seven units required. Maximum credit seven units. Experiences emphasize application of social work objectives, principles, and skills in service to individuals, families, groups, organizations, and communities.

#### SWORK 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)**

Prerequisite: Social Work 601.

Selected social welfare policies used to examine processes of policy formulation, policy analysis skills, and relationships of policy decisions and indecisions to outcomes of social welfare interventions. Maximum credit six units applicable to a master's degree.

**SWORK 720. Seminar in Selected Topics in Human Behavior and Social Environment (3)**

Prerequisite: Social Work 620A.

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 750.

Family dynamics and social work practice related to family change.

**SWORK 740. Advanced Seminar in Social Work Administration and Community Development (3)**

Prerequisites: Social Work 631, 632, and concurrent registration in Social Work 755.

Human services program design, strategic planning, marketing, organizational performance 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 750.

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 755.

Study of selected aspects of administration in human services organizations to include leadership, organizational learning, organizational change management, and supervision. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units.

**SWORK 750. Advanced Field Practicum: Direct Practice Social Work (4) 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. (Formerly numbered Social Work 750A.)

**SWORK 755. Advanced Field Practicum: Social Work Administration and Community Development (4) Cr/NC/RP**

Prerequisites: Social Work 650 and concurrent registration in Social Work 720 or Social Work 740 and 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 organizations and communities. (Formerly numbered Social Work 750B.)

**SWORK 758. Seminar in Social Work and Selected Fields of Practice (1-3)**

Traditional and emerging fields of practice and related social work responsibilities and roles. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

**SWORK 780. Seminar in Social Work and Selected Populations-at-Risk (3)**

Social work practice with selected populations-at-risk such as one-parent families, children in institutions, ethnic minority immigrants, Native-Americans in the urban scene, and foreign-born brides of U.S. servicemen. See *Class Schedule* for specific content. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**SWORK 781. Seminar on Selected Populations-at-Risk (3)**

Knowledge about and analysis of selected populations-at-risk, social work responsibilities in emerging service demands by diverse and needful, high risk segments of the population in a complex society, and implications for social work practice. Population-at-risk for study to be announced in *Class Schedule*. May be repeated with new content. Maximum credit six units applicable to a master's degree.

**SWORK 791. Applied Social Work Practice Research Seminar (3)**

Prerequisite: Social Work 690.

Preparation for practitioner-researcher role through application of social work research concepts and procedures in practice situations (in class and field) of social work interventions. Maximum credit six units applicable to a master's degree.

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

Prerequisite: Consent of Instructor.

Research in one of the areas of social work. Maximum credit three units applicable to a master's degree.

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

Prerequisite: Consent of staff; to be arranged with director and instructor.

Individual study. Maximum credit three units applicable to a master's degree.

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

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

Preparation of a thesis for the master's degree.

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

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

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

**SWORK 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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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

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

Norma Ojeda, 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

Enrico A. Marcelli, Ph.D., Associate Professor of Sociology

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

Paul W. Sargent, Ph.D., Associate Professor of Sociology

Kyra R. Greene, 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 sociology 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. Regular opportunities exist for participation in these projects by graduate students within the department. The program also prepares students for teaching careers.

## 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) English language 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 (at least two must be from persons who can speak to academic ability);

- (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 Four of this bulletin. Students must have taken the first three courses of the core course series (Sociology 600, 601, 607). Students must have a 3.0 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) (SIMS Code: 116901)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree, as described in Part Four 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, 605, 607, 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 for Plan A (Thesis) OR if completing Plan B (Comprehensive Examination) an additional 700-level sociology seminar or Sociology 710 or 796 is required.

Students who are interested in applied sociology (SIMS Code: 116903) are encouraged to take Sociology 796 (Field Practicum).

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. The proposal may be developed through enrollment in Sociology 797 (which cannot count as a seminar but may be used to fulfill the elective units). Once the thesis is complete, an oral defense is required to complete the program.

### Courses Acceptable on Master's Degree Program in Sociology (soc)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

#### UPPER DIVISION COURSES

#### SOC 522. The Family in Comparative and Cross-Cultural Perspectives (3)

Prerequisite: Sociology 101. Recommended: Sociology 421.

Comparative study of selected family systems in the past and present. Comparative analysis of major social and demographic changes in marriage and family in post-industrial nations and less developed countries. Cross-cultural comparisons of family arrangements in contemporary America by social classes and racial-ethnic groups.

#### SOC 537. Political Sociology (3)

Prerequisite: Sociology 101.

Social organization of political processes. Power and authority, social class, primary groups, collective behavior, social change, and other sociological factors considered in their relationships to political processes.

#### SOC 539. Sociology of Education (3)

Prerequisite: Sociology 101.

Social organization of education in the United States and other societies. Structure and functions of educational institutions. Formal and informal education. Class, ethnic, and other social factors affecting the educational process. Implications of educational decision making and testing.

#### SOC 543. Police, Courts, and Corrections: The Sociology of Crime and Punishment (3)

Prerequisite: Sociology 101.

Historical sociology of the American criminal justice system. Development and functions of police, criminal courts, prisons, parole, and probation. Theories and ideologies of punishment and rehabilitation. Review of contemporary research.

#### SOC 554. United States-Mexico Transborder Populations and Globalization (3) (Same course as Chicana and Chicano Studies 554)

Prerequisite: 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)

Prerequisite: Sociology 101.

Contemporary migration to the United States, especially from Latin America and Asia. Political and economic migration. Immigrant and refugee adaptation. Theoretical controversies, research applications, and policy implications.

#### SOC 596. Current Topics in Sociology (1-3)

Prerequisite: Sociology 101.

Selected specialized, controversial or currently relevant topics in sociology. Maximum opportunity provided for student initiative in determining course content and procedures. May be repeated with new content. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. 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: Core Course (3)

Prerequisite: 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 Classical Social Theory: Core Course (3)

Prerequisite: Graduate standing.

Systematic treatment of original European and American classic sociological writings.

#### SOC 605. Advanced Contemporary Social Theory: Core Course (3)

Prerequisite: Graduate standing.

Examination and analysis of original works in modern/postmodern sociological theory.

#### SOC 607. Advanced Quantitative Methods: Core Course (3)

Prerequisites: Graduate standing and Sociology 201.

Research methods appropriate to particular types of sociological projects with emphasis on analysis of descriptive statistics and use of linear and non-linear regression methods. Methods of evaluating reported findings in sociological research. (Formerly numbered Sociology 760.)

#### SOC 608. Advanced Qualitative Methods: Core Course (3)

Prerequisites: Graduate standing and credit or concurrent registration in Sociology 600.

Qualitative methods for data collection, analysis, and reporting in contemporary sociological research and related disciplines. Study, practice, critiques of techniques; ethnography, interviews, archival research, content analysis.

#### SOC 695. Topics in Directed Readings (3)

Prerequisite: Credit or concurrent registration in at least one core course or one seminar.

Selected reading providing coverage of social theory, social disorganization, social organization, social institutions, social psychology (sociological approaches), community research methods, population and demography, or special topics. Maximum credit six units applicable to a master's degree.

**SOC 696. Experimental Topics (3)**

Prerequisite: Graduate standing.

Intensive study in specific areas of sociology. May be repeated with new content. See *Class Schedule* for specific content. 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)**

Prerequisite: 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, policy making, and methodological implications of theories.

**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, 607, 608.

Supervised field placement in community agency. Application of sociological theories and methods to policy and research needs of agency. Maximum credit six units applicable to a master's degree.

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

Prerequisite: Sociology 407.

Independent investigation of special topics. Maximum credit six units applicable to a master's degree.

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

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

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

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

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

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

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

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

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

**SOC 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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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

Alda Blanco, Ph.D., Professor of Portuguese, Chair of Department  
Claudia V. Angelelli, Ph.D., Professor of Spanish  
Gail L. Robinson, Ph.D., Professor of Spanish  
Juan M. Godoy, Ph.D., Associate Professor of Spanish  
José Mario Martín-Flores, Ph.D., Associate Professor of Spanish  
(Graduate Adviser)  
Liana Ewald, 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. The program prepares students for a professional career in teaching.

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 is preferable. 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) English language 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 recommendation from professors who are familiar with your abilities as a student;
- (2) Statement of purpose in Spanish;
- (3) Writing sample (preferably a research paper or essay written in Spanish that was submitted in an undergraduate course from 6 to 10 pages).

## Advancement to Candidacy

In addition to meeting the requirements for advancement to candidacy as described in Part Four 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) (SIMS Code: 117101)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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.

## Courses Acceptable on Master's Degree Programs in Spanish (SPAN) (PORT)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs* sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

### Spanish (SPAN) 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)

Prerequisite: Spanish 405A.

A close reading of Cervantes' novel *Don Quixote*, Parts I and II.

#### 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)

Prerequisite: Spanish 448.

Sounds of Spanish: consonants, vowels, semivowels, syllabic structure, rhythm, stress. Sound system of Spanish: phonemes and allophones. Main differences between English and Spanish and between regional and social varieties of Spanish. Alternative analytical paradigms.

#### SPAN 561. Methods in Teaching Spanish as a Second Language (3)

Prerequisite: Spanish 350 or 448.

Teaching of Spanish as a second language: contemporary theory and methods.

#### 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)

Prerequisite: Spanish 350 or 391.

Consecutive interpretation techniques focusing on current events to include notetaking technique for interpreters, preparation for meetings, language register, active listening, structure of a speech, abstracting meaning, sight translation in the booth.

#### SPAN 594B. Simultaneous English/Spanish Interpretation (3)

Prerequisite: Spanish 594A with a grade of B (3.0) or better.

Simultaneous interpretation techniques focusing on current events. Simultaneous, whispered, and relay interpretation, preparation for meetings, language register, listening, structure of a speech, abstracting, sight translation in the booth.

#### SPAN 596. Selected Studies in Spanish (3)

Prerequisite: Spanish 302 or 381.

Topics in Spanish or Spanish American language, literature, culture and linguistics. May be repeated with new content. 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

#### SPAN 601. Seminar in Hispanic Literary Theory (3)

Prerequisite: Graduate standing.

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)

Prerequisite: Graduate standing.

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 601.

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 601.

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 601.

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 601.

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 611. Advanced Topics in Spanish Linguistics (3-6)**

Prerequisite: Spanish 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)**

Prerequisite: Spanish 602.

Analysis of oral discourse in Spanish. Basic readings in field and strategies to collect and analyze data.

**SPAN 630. Golden Age Drama (3)**

Prerequisite: Spanish 601.

The works of Lope de Vega and Calderon among others.

**SPAN 631. Spanish Women Writers (3)**

Prerequisite: Spanish 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 632. Seminar in Guilt and Innocence in Nineteenth and Twentieth Century Narrative (3)**

Prerequisite: Spanish 601.

Evolution of detective novel from nineteenth through twentieth century. Socio-historic context and thematic concepts; truth and fiction, crime and punishment, construction of identities (criminal, delinquent, detective, victim). Maximum credit six units applicable to a master's degree.

**SPAN 661. Issues in the Study of Spanish Bilingualism (3)**

Prerequisite: Spanish 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 682. Spanish Language Policy and Language Planning (3)**

Prerequisite: Spanish 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)**

Prerequisite: Consent of instructor.

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)**

Prerequisite: Spanish 601.

A genre or movement of Spanish American literature. 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)**

Prerequisite: Spanish 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)**

Prerequisite: Spanish 602.

The application of linguistic theory to the teaching of Spanish at the secondary and college levels.

**SPAN 780. Multimedia Methods for Teaching Spanish (3)**

Prerequisite: Spanish 602.

Theory and applications of teaching Spanish through multimedia and interactive technologies. Research and development of interactive multimedia programs for use in the classroom and in the language laboratory.

**SPAN 781. Spanish Language Testing (3)**

Prerequisite: Spanish 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 792. Spanish Language and Society (3)**

Prerequisite: Spanish 602.

Basic notions of relationship between language and society in Spanish-speaking world. Methodologies applied to data from monolingual and bilingual speech communities. Variationism, ethnography of communication, and sociology of language in Spanish-speaking world.

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

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

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

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

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

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

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

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

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

**SPAN 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

**Portuguese (PORT)  
UPPER DIVISION COURSE**

**NOTE: All upper division courses in Portuguese are taught in Portuguese unless otherwise stated.**

**PORT 535. Brazilian Literature (3)**

Prerequisite: Portuguese 401.

Important movements, authors, and works of the literature of Brazil from the colonial period to modern times.

### Special Education

Refer to "Education" in this section of the bulletin.



# Speech, Language, and Hearing Sciences

In the College of Health and Human Services

**OFFICE: Speech, Language, and Hearing 221**

**TELEPHONE: 619-594-7746**

**FAX: 619-594-7109**

**<http://chhs.sdsu.edu/slhs/>**

## Faculty

Beverly B. Wulfbeck, 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)  
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  
Carol L. Mackersie, Ph.D., Professor of Speech, Language, and Hearing Sciences  
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  
Peter Torre, III, Ph.D., Associate Professor of Speech, Language, and Hearing Sciences  
Henrike K. Blumenfeld, Ph.D., Assistant Professor of Speech, Language, and Hearing Sciences  
Ignatius Nip, Ph.D., Assistant Professor of Speech, Language, and Hearing Sciences  
Sonja Pruitt-Lord, Ph.D., Assistant Professor of Speech, Language, and Hearing Sciences

## General Information

The master's degree program in speech pathology and professional doctorate in audiology (AuD) are accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology.

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 and a professional doctorate in audiology (AuD). 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. An M.A. degree in speech, language, and hearing sciences provides the necessary education, technical training, and creative experience necessary for professional activity, college-level teaching, and preceptors in speech-language pathology and related fields.

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 its on-campus audiology and speech-language clinics. 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 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) English language score, if medium of instruction was in a language other than English (<http://www.ets.org>, SDSU institution code 4682).

## Speech, Language, and Hearing Sciences

### 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 Four 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 Four 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 two 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 (SIMS Code: 550182).** 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 101, 106, 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 44 units. The following core courses are required: Speech, Language, and Hearing Sciences 570, 600, 606, 607, 608, 609A, 609B, 613, 614, 617, 675, and either 672 or 673. In addition, students must complete nine units from Speech, Language, and Hearing Sciences 707, 750, 754, 790, 793, 794, 795, 797, 798, 799A. At least three of the nine units must be selected from Speech, Language, and Hearing Sciences 707, 750, 754, 790, 793, 794.

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.

#### Specialization in Bilingualism

Students who speak languages for which clinical training is not available (i.e., languages other than Spanish) and who have an interest in bilingualism are encouraged to apply to the concentration in speech-language pathology with a specialization in bilingualism. Students are required to pass a language proficiency test in a language other than English. To be a candidate for the specialization, a student must be admitted to the master's degree program in speech-language pathology since the specialization is coordinated with these endeavors.

The following core courses are required: Speech, Language, and Hearing Sciences 570, 600, 605, 606, 607, 608, 609A, 609B, 613, 614, 617, 672 or 673, 675, 794. Students must also complete three units of Speech, Language, and Hearing Sciences 750, 795, or 798 with approval of the school adviser.

B. **Concentration in Communicative Sciences (SIMS Code: 550142).** 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 101, 106, 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) (SIMS Code: 550102)

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), Pruitt (Speech, Language, and Hearing Sciences), Reilly (Psychology), Shapiro (Speech, Language, and Hearing Sciences), Wulfeck (Speech, Language, and Hearing Sciences).

**University of California, San Diego:** Ackerman (Linguistics), Bellugi (Salk Institute, Psychology), Carver (Psychology), Coulson (Cognitive Science), Deák, (Cognitive Science), Elman (Cognitive Science), Ferreira (Psychology), Halgren (Neurosciences), Kritchinsky (Neurosciences), Kutas (Cognitive Science), Mayberry (Linguistics), Moore (Linguistics), Padden (Communications), Rayner (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) English language 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/slshs/>);
- (2) Statement of purpose;
- (3) Three letters of recommendation (<http://chhs.sdsu.edu/slshs/>) 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.

### Credential

The School of Speech, Language, and Hearing Sciences offers academic and practica coursework applicable to the Speech Language Pathology (SLP) Credential (**Credential Code: 00900**), required for working in California public schools.

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.

#### **Speech Language Pathology 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 Speech Language Pathology (SLP) 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 SLP credential. Candidates for SLP 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 SLP 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 in Speech-Language Pathology and Audiology by the Council on Academic Accreditation in Audiology and Speech-Language Pathology**

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 Council on Academic Accreditation in Audiology and Speech-Language Pathology. The certificate requires a professional doctorate in audiology (see Audiology) and a master's degree in speech-language pathology, 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 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.

### Bilingual Speech-Language Pathology Certificate

The Certificate in Bilingual Speech-Language Pathology is designed for students who plan to work with bilingual speakers with communicative disorders. To be a candidate for the certificate, a student must be seeking the master's degree program in speech-language pathology since the certificate is coordinated with these endeavors.

The certificate program requires completion of 13 units to include nine units of substantive coursework and four units of graduate clinical practicum with bilingual speakers with communicative disorders. Based on research and clinical expertise of the faculty, as well as the availability of a clinical population, the certificate is currently focused on Spanish-English communicative disorders. The following core courses are required: Speech, Language, and Hearing Sciences 672, 673, 794. In addition, students must complete 100 hours of graduate clinical practicum in the target language(s). Candidates seeking admission to the certificate program must pass a Spanish proficiency test and satisfy admission requirements to the school as listed in the Graduate Bulletin. Students who speak languages for which clinical training is not available (i.e., languages other than Spanish) are encouraged to apply to the specialization in bilingualism within the concentration in speech-language pathology.

### Courses Acceptable on Master's and Doctoral Degree Programs in Speech, Language, and Hearing Sciences (SLHS)

*Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

#### UPPER DIVISION COURSES

##### SLHS 503. Advanced Speech Physiology (3)

Prerequisites: Speech, Language, and Hearing Sciences 320 and 321.

Methodology used to evaluate speech physiology in normal and disordered populations. Discussion of characteristics and etiologies of various speech disorders.

##### SLHS 511. Pediatric Aural Rehabilitation (3)

Prerequisites: Speech, Language, and Hearing Sciences 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)

Prerequisite: Speech, Language, and Hearing Sciences 320.

Phonology, phonological development, and phonological disorders as they relate to basic linguistic theory. Concepts considered through critical thinking and problem-solving.

##### 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.

Prerequisite: 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.

Prerequisite: Clinic clearance.

Screening speech and language of adults in various community facilities and settings.

##### SLHS 525. Clinical Processes (1-2)

Prerequisite: 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. Deaf Studies and Education (3)

Prerequisites: Speech, Language, and Hearing Sciences 150; and 201 or competency in American Sign Language.

History and current trends in deaf studies and education; contemporary issues; elementary, secondary and higher education programs for young deaf students; communication and visual technologies; federal laws and legal precedents; activism and leadership in deaf community; diverse career opportunities.

##### SLHS 558. ASL Structure and Acquisition (3)

Prerequisites: Speech, Language, and Hearing Sciences 150; and 201 or competency in American Sign Language.

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 570. Dysphagia (3)

Prerequisite: Consent of instructor.

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)**

Prerequisite: 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)**

Prerequisite: Twelve units in speech, language, and hearing sciences courses.

Specialized study of selected topics from the area of speech-language pathology, audiology, education of the hearing impaired, and speech and hearing science. May be repeated with new content. 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**

**SLHS 600. Research Methods in Communication Sciences and Disorders (3)**

Prerequisite: Consent of instructor.  
Methods, evaluation, and exposition of research in communication sciences and disorders.

**SLHS 606. Voice, Resonance, and Fluency Disorders (3)**

Prerequisite: Consent of instructor.  
Normal voice, resonance, and fluency, symptoms and causes of voice, resonance, and fluency disorders and their assessment and management.

**SLHS 607. Phonology and Phonological Disorders (3)**

Prerequisite: Consent of instructor.  
Characterization of phonological disorders, assessment frameworks, intervention strategies. Theoretical frameworks of phonology as applied to and experimentally evaluated in speech-language pathology. Methodology considered within context of clinical cases studies designed to facilitate critical thinking and problem-solving.

**SLHS 608. Acquired Neuromotor Speech Disorders (3)**

Prerequisite: Consent of instructor.  
Theories and clinical methods of diagnosis and intervention pertaining to motor speech disorders (dysarthria and apraxia of speech) in adults.

**SLHS 609A. Acquired Neurogenic Language and Cognitive Disorders I (3)**

Prerequisite: Consent of instructor.  
Theories and clinical methods of diagnosis and intervention pertaining to language and communication disorders in adults with left or right hemisphere brain damage.

**SLHS 609B. Acquired Neurogenic Language and Cognitive Disorders II (3)**

Prerequisite: Speech, Language, and Hearing Sciences 609A.  
Theories and clinical methods of diagnosis and intervention pertaining to cognitive and linguistic disorders in adolescents and adults with traumatic brain injury, dementing illness or frontal lobe impairments.

**SLHS 613. Language Disorders: Infancy Through Preschool (3)**

Prerequisite: Consent of instructor.  
Major theories of language development with focus on early language development; effect of theoretical perspective on approaches to assessment and intervention; development and evaluation of assessment and intervention procedures and instruments.

**SLHS 614. Language Disorders: School Age Through Adolescence (3)**

Prerequisite: Consent of instructor.  
Normal and impaired language development in children five years through adolescence. Assessment and intervention for language disorders across spoken and written modalities.

**SLHS 617. Diagnostic Methods in Speech-Language Pathology (3)**

Prerequisite: Consent of instructor.  
Principles and procedures for culturally relevant assessment of communication disorders in children and adults. Ethnographic interviewing; formal, informal, and unbiased testing; clinical reporting. Practice with selected methods and tools.

**SLHS 618A. Diagnostic Practicum in Speech-Language Pathology: Pediatrics (1)**

Four hours of supervision.  
Prerequisites: Speech, Language, and Hearing Sciences 600, 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, 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.  
Prerequisite: 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, 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, 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, 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.  
Prerequisite: Consent of instructor.  
Supervised practice with speech-language-hearing problems in off-campus settings. Up to 10 hours per week of client contact plus staffing. Up to three units may be taken concurrently. Maximum credit nine units.

**SLHS 672. Seminar in Communicative Disorders in Bilingual Adults (3)**

Prerequisites: Speech, Language, and Hearing Sciences 600 and 609A.  
Linguistic and cognitive system in normal bilingual adults compared to monolingual peers, and in bilingual adults with language disorders. Assessment and intervention strategies in bilingual adults' communicative and cognitive disorders. Cross-cultural issues in selection of assessment and intervention procedures.

### **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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: Graduate standing.

Intensive study in specific areas of audiology, education of hearing impaired, speech and hearing science, and speech-language pathology. May be repeated with new content. See *Class Schedule* for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

### **SLHS 707. Seminar in Phonological Acquisition (3)**

Prerequisite: Consent of instructor.

Theoretical, empirical, methodological, and applied issues associated with phonological acquisition of first-language learners, children with speech disorders, and second-language learners.

### **SLHS 750. Seminar in Language, Cognition, and the Brain: Sign Language Perspectives (3)**

Prerequisite: 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)**

Prerequisite: Consent of instructor.

Evaluation of research in disorders of speech production (apraxia, dysarthria, stuttering) from perceptual, acoustic, and physiologic perspectives. Includes models of motor control and speech production as a basis for understanding disorders.

### **SLHS 790. Seminar in Foundations of Language Science (3)**

Prerequisite: Consent of instructor.

Current issues, theory, and research concerning language representation, processing, and neurological organization in adults and children.

### **SLHS 793. Seminar in Disorders of Language and Cognition/Children (3)**

Prerequisite: Consent of instructor.

Language impairment in children, including primary versus secondary language impairment, modular versus processing explanations, relationships between language and cognition, as well as disassociations of development across different populations.

### **SLHS 794. Seminar in Language Disorders in Multilingual Populations (3)**

Prerequisite: Consent of instructor.

Language disorders in linguistically diverse populations. Disorders of phonological, morphological, syntactic, and semantic aspects of target languages and their clinical implications.

### **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**

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

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

### **SLHS 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

## DOCTORAL COURSES

### **SLHS 897. Doctoral Research (1-15) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Individual investigation to the general field of the dissertation.

### **SLHS 898. Doctoral Special Study (1-8) Cr/NC/RP**

Prerequisite: Admission to the doctoral program.

Individual study in the field of specialization. Maximum credit eight units applicable to the doctoral degree.

### **SLHS 899. Doctoral Dissertation (1-15) Cr/NC/RP**

Prerequisites: An officially constituted dissertation committee and advancement to candidacy.

Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.

## CREDENTIAL COURSE

### **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.

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).



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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  
Juanjuan Fan, Ph.D., Professor of Statistics  
(Graduate Adviser for the M.S. in Statistics)  
Richard A. Levine, Ph.D., Professor of Statistics  
Kung-Jong Lui, Ph.D., Professor of Statistics, (Statistics Coordinator  
and Graduate Adviser for the M.S. in Statistics with Concentration  
in Biostatistics)  
Chii-Dean Lin, Ph.D., Associate Professor of 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.

The graduate programs can prepare students for a teaching career.

## 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 Four of this bulletin.

## Specific Requirements for the Master of Science Degree in Statistics

**(Major Code: 17021) (SIMS Code: 776369)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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, one semester of linear algebra, and one semester of 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 be counted toward the degree course requirements).

The student must complete a minimum of 31 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 510, 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 672, 673, 676, 677, 678, 679, 680A, 680B, 696, 700, 701, 702, 795.
3. Complete three additional units of graduate level or approved 500-level statistics courses, not including Statistics 799A.
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. Complete one unit of Statistics 720.
7. 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 31-unit program and are required to pass a final oral examination on the thesis, open to the public.
8. In other cases, Plan B will be followed. Students who choose Plan B are required to complete three additional units of 600- and 700-numbered statistics courses, not including Statistics 799A, 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) (SIMS Code: 776370)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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, one semester of linear algebra, and one semester of 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 be counted toward the degree course requirements).

The student must complete a minimum of 31 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 510, 670A, 670B with no grade less than B in each course. These are core statistics courses.
2. Complete Statistics 680A, 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 520, 560, 570, 580, 596, 672, 673, 676, 677, 678, 679, 696, 700, 701, 702, 795.
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. Complete one unit of Statistics 720.
6. 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.
7. In other cases, Plan B will be followed. Students who choose Plan B are required to complete three additional units of 600- and 700-numbered statistics courses, not including Statistics 799A, and pass a comprehensive written examination. Policy and procedures for the Plan B examination are documented and available from the Department of Mathematics and Statistics.

### Courses Acceptable on Master's Degree Programs in Statistics (STAT)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

#### UPPER DIVISION COURSES

**NOTE: Proof of completion of prerequisites required for all upper division courses: Copy of transcript.**

#### STAT 510. Applied Regression Analysis (3)

Prerequisite: Statistics 350A 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 R computer software packages.

#### STAT 520. Applied Multivariate Analysis (3)

Prerequisite: Statistics 350B or comparable course in statistics.

Multivariate normal distribution, multivariate analysis of variance, principal components, factor analysis, discriminant function analysis, classification, and clustering. Statistical software packages will be used 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)

Prerequisite: Mathematics 252.

Discrete and continuous random variables, probability mass functions and density functions, conditional probability and Bayes' theorem, moments, properties of expectation and variance, joint and marginal distributions, functions of random variables, moment generating functions. Special distributions and sampling distributions.

#### STAT 551B. Probability and Mathematical Statistics (3)

Prerequisite: Statistics 551A.

Point and interval estimation and hypothesis testing in statistical models with applications to problems in various fields.

#### STAT 560. Sample Surveys (3)

Prerequisite: Statistics 550 or 551A.

Methods for design and analysis of sample surveys with applications to social and biological sciences. Simple random sampling, stratification and clustering, ratio and regression estimators, subsampling, selected topics in survey methodology.

#### STAT 570. Stochastic Processes (3)

Prerequisite: Statistics 551A.

Introduction to stochastic processes with selected applications.

#### STAT 575. Actuarial Modeling (3)

Prerequisite: Statistics 550 or 551A.

Actuarial models and applications of probability and statistics to insurance and other financial risks. Utility theory; risk models, compound processes; survival distributions and life tables; life insurance, annuities and benefits.

#### STAT 580. Statistical Computing (3)

Two lectures and two hours of activity.

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)

Prerequisite: Consent of instructor.

Selected topics in statistics. May be repeated with the approval of the instructor. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. 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)

Prerequisites: 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 672. Nonparametric Statistics (3)**

Prerequisite: Statistics 551B or 670B.

Theory and application of commonly used distribution-free test statistics, including sign and Wilcoxon tests, and corresponding nonparametric point and interval estimators. Kruskal-Wallis and Friedman tests for analysis of variance, nonparametric regression methods, and other selected topics.

**STAT 673. Time Series Analysis (3)**

Prerequisite: Statistics 551B or 670B.

Box-Jenkins (ARIMA) methodology for analysis of time series data with statistical software applications. Autocorrection functions, stationary and nonstationary time series, autoregressive and moving average processes, seasonality. Methods for model-based estimation, diagnostics, and forecasting.

**STAT 676. Bayesian Statistics (3)**

Prerequisite: Statistics 551B or 670B.

Bayes' theorem; conjugate priors; likelihood principle; posterior probability intervals; Bayes factors; prior elicitation; reference priors; computational techniques; hierarchical models; empirical and approximate Bayesian inference; posterior sensitivity analysis; decision theory.

**STAT 677. Design of Experiments (3)**

Prerequisite: Statistics 550 or 551A.

Methods for design and analysis of experiments with applications to industry, agriculture, and medicine. Concepts of randomization, blocking, and replication. Incomplete block designs, fractional factorial experiments, response surface methods, selected topics.

**STAT 678. Survival Analysis (3)**

Prerequisite: Statistics 551B or 670B.

Survival distributions; inference in parametric survival models; life tables; proportional hazards model; time-dependent covariates; accelerated time model and inference based on ranks; multivariate time data and competing risks.

**STAT 679. Analysis of Discrete Data (3)**

Prerequisite: Statistics 551B or 670B.

Discrete sampling models; goodness-of-fit testing; methods for binary data with covariates, including logistic regression and probit analysis; loglinear modeling of multidimensional contingency tables; ordered categories; incomplete tables; Bayesian methods; hierarchical models.

**STAT 680A-680B. Advanced Biostatistical Methods (3-3)**

Prerequisites: Statistics 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: Consent of instructor.

An intensive study in advanced statistics. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units applicable to a master's degree.

**STAT 790. Practicum in Teaching of Statistics (1) Cr/NC**

Prerequisite: Award of graduate teaching associateship in statistics.

Supervision in teaching statistics. Lecture writing, style of lecture presentation and alternatives, test and syllabus construction, and grading system. Not applicable to an advanced degree. Required for first semester GTA's. Maximum credit four units applicable to a master's degree.

**STAT 795. Practicum in Statistical Consulting (1-2) Cr/NC**

Prerequisite: Statistics 670B.

Statistical communication and problem solving. Short-term consulting to campus clients in design and analysis of experiments, surveys, and observational studies. Heuristics for effective problem identification, client interactions, oral and written presentations. Maximum credit three units applicable to a master's degree.

**STAT 797. Research (1-3) Cr/NC/RP**

Prerequisite: Six units of graduate level statistics.

Research in one of the fields of statistics. Maximum credit six units applicable to a master's degree.

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

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

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

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

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

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

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

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

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

**STAT 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

Teacher Education

Refer to "Education" in this section of the bulletin.

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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)  
Mark W. Freeman, M.F.A., Professor of Theatre, Television, and Film  
Martha M. Lauzen, Ph.D., Professor of Theatre, Television, and Film  
Jack Ofield, Professor of Theatre, Television, and Film, Emeritus,  
Filmmaker in Residence  
Timothy A. Powell, Ph.D., Professor of Theatre, Television, and Film  
David A. Morong, M.F.A., Associate 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 gain the essential education, technical training, and creative experience necessary for professional careers, further study in

the field, and/or professional careers in teaching. 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 state-of-the-art 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, English language 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) English language 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 Four 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) (SIMS Code: 667307)

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.

#### Courses Acceptable on Master's Degree Program in Television, Film and New Media Production (TFM)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

#### UPPER DIVISION COURSES

##### TFM 510. Advanced Script Writing for Television and Film (3)

Prerequisite: Television, Film and New Media 314 (or consent of instructor).

Scripting of dramatic original and adaptation forms, and documentary. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units.

##### TFM 522. Advanced Film and Television Cinematography (3)

Two lectures and three hours of laboratory.

Prerequisite: Television, Film and New Media 314 (or consent of instructor).

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)

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.

## Television, Film and New Media Production

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### **TFM 540. Documentary Production (3)**

Two lectures and three or more hours of activity.

Prerequisites: Television, Film and New Media 314 and 361.

Hands-on field experiences in documentary production to include research and writing techniques, investigative procedures, interviewing, shooting and editing. Analyze significant documentaries. (Formerly numbered Television, Film and New Media 340.)

### **TFM 550. Art Direction for Television and Film (3)**

One lecture and four hours of activity.

Prerequisites: Television, Film and New Media 350; 360 or 361 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 314 (or consent of instructor), 360, and 361.

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.

Prerequisite: Television, Film and New Media 314 (or consent of instructor).

Production processes and techniques to include producing, critical analysis, directing, digital cinematography, and editing of scripted projects. Experience in individual and university-sponsored productions.

### **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 571. Selected Topics in Director Studies (3)**

Prerequisite: Television, Film and New Media 310.

Historical significance of 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 590. Directing for Film and Television (3)**

One lecture and six hours of activity.

Prerequisite: Television, Film and New Media 314 (or consent of instructor).

Directing fundamentals and production to include script analysis, director's preparation and directing actors. (Formerly numbered Television, Film and New Media 390.)

### **TFM 596. Selected Topics in Television, Film and New Media (1-4)**

Prerequisite: Twelve units in television, film and new media.

Specialized study of selected topics from the areas of television, film and new media. May be repeated with new content. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: 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)**

Prerequisite: Television, Film and New Media 600.

Intensive study in television, film and new media issues and trends. See *Class Schedule* for specific content. May be repeated with new content. Maximum credit nine units applicable to a master's degree in television, film and new media.

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

Individual study. Contract required. Arranged with graduate coordinator in area of study. Maximum credit six units applicable to a master's degree.

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

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

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

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

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

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

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# Theatre Arts

In the School of Theatre, Television, and Film  
In the College of Professional Studies and Fine Arts

## OFFICE: Dramatic Arts 201

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)

Margaret C. Larlham, M.A., Professor of Theatre, Television, and Film  
Peter F. Larlham, Ph.D., Professor of Theatre, Television, and Film  
Loren P. Schreiber, M.F.A., Professor of Theatre, Television, and Film  
Peter J. Cirino, M.F.A., Associate Professor of Theatre, Television,  
and Film

Donald J. Hopkins, Ph.D., Associate Professor of Theatre, Television,  
and Film

Danielle J. Bedau, M.F.A., Assistant Professor of Theatre, Television,  
and Film

Denitsa D. Bliznakova, M.F.A., 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. Graduates in these programs learn in the artist-scholar model and are prepared for careers as practitioners and educators. 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 post-secondary 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) English language 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. Application deadline is February 1. To inquire about the program, including spring admission, contact the director of the M.A. program. Visit our Web site at <http://tlf.sdsu.edu> for current contact information.

### Advancement to Candidacy

All students in the Master of Arts program must meet the general requirements for advancement to candidacy, as described in Part Four 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) (SIMS Code: 662504)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four 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 nine 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 and two contrasting monologues.
3. Three references attesting to the candidate's academic qualifications and level of competence in the areas of acting, singing, and dancing.
4. Submit online program application available at <http://theatre.sdsu.edu/streaming/html/academics/musmf.htm>.



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 Four 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) (SIMS Code: 662505)**

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 (SIMS Code: 662517)

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 two 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 three units from Theatre 532, 533A, 533B, 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 (SIMS Code: 662539)

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, 530B, 539, 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 790 or 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 adviser. This project may be supported by a written thesis project report (analysis/apologia) or by an original body of work of theatrical design accompanied by a written report.

#### Concentration in Musical Theatre (SIMS Code: 662587)

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 eight units), 600A, 600B, 620A, 620B, 622A, 622B, 623, 627 (maximum credit 16 units), 630 (maximum credit four units), 650, and 659. The student must also complete nine 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.

### Courses Acceptable on Master's Degree Programs in Theatre Arts (THEA)

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

#### UPPER DIVISION COURSES

##### THEA 510. Creative Drama and Language Arts (3)

Prerequisite: Theatre 310 or 315.

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 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)

Prerequisite: Theatre 325 or graduate standing.

Theory and application of various aspects of dramaturgy and theatre literary management. Production-oriented synthesis of advanced text analysis, dramatic theory and criticism, historical research, and dramatic literature. Attendance at select plays required. May be repeated with new content. Maximum credit six units.

##### THEA 530. Period Dress and Decor (3)

Prerequisite: Theatre 240 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 credits 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.

Prerequisite: Theatre 240.

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.

Prerequisite: 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.

Prerequisite: Theatre 240 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.

Prerequisite: Theatre 545.

Computer aided drafting applications for theatre designer.

### **THEA 547. Lighting Design II (3)**

Two lectures and three hours of laboratory.

Prerequisite: Theatre 447.

Advanced design theories and lighting practice for theatre and dance. Laboratory and production related activities.

### **THEA 548. Sound Design for the Theatre (3)**

Two lectures and two hours of activity.

Prerequisites: Theatre 240, 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.

Prerequisite: 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. Maximum credit four units.

### **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 553. Technical Direction (3)**

Two lectures and three hours of activity.

Prerequisites: Theatre 240, 442.

Modern technical direction including project management (budgeting and procurement, managing employees); design and engineering; automation, rigging, advanced stagecraft (metalcraft, CNC machinery, composite construction), and safety. Maximum credit six units.

### **THEA 554A. Costume Design Technology I (2)**

Four hours of activity.

Prerequisite: Theatre 240.

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.

Prerequisite: Theatre 240.

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.

### **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 Theatre 570A and six units for Theatre 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)**

Prerequisite: Twelve units in theatre.

A specialized study of selected topics from the areas of theatre. May be repeated with new content. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. 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)**

Prerequisite: Theatre 600A.

Development and presentation of thesis with focus on writing and formal parameters.

### **THEA 610. Seminar in Design Aesthetics for Theatre, Television, and Film (3)**

Prerequisites: Admission to graduate program in theatre arts or television, film and new media production.

Aesthetic theories and practice. Design aesthetics as applied to theatre, television, film and new media production

**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.  
**A.** Nineteenth Century Viennese Operetta through 1950  
**B.** 1950 to Present

**THEA 621. Seminar in Theories of the Theatre (3)**

Prerequisite: Minimum three units of upper division theatre history.  
 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.

**THEA 623. Seminar in Musical Theatre Script and Score Analysis (3)**

Prerequisite: 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.  
 Prerequisite: 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)**

Prerequisite: 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**

Prerequisite: Admission to M.F.A. in design and technical theatre program.  
 Design projects for department productions. To be arranged with area adviser. Should be repeated each semester during the first two years of study for maximum credit four units.

**THEA 643. Collaborative Studies in Design (3)**

Two lectures and two hours of activity.  
 Prerequisite: Admission to M.F.A. design and technical theatre program. This course must be repeated each semester by the M.F.A. design student for a maximum of 12 units.  
 Design of theatrical productions with emphasis on artistic collaboration and integration of scenery, costumes and lights. Attention to graphic presentation techniques as well as designs produced.

**THEA 644. Seminar in Contemporary Designers (3)**

Prerequisite: Theatre 643.  
 Major set, costume, and lighting designers working in contemporary theatre, film, and television.

**THEA 645. Seminar in Theatrical Lighting (3)**

Prerequisite: Theatre 643.  
 Aesthetics of stage lighting as it applies to the areas of scenery and costume design. Exploration of literature in the field of theatrical lighting. Investigation of commercial and architectural lighting. Projects involving use of color and distribution of light.

**THEA 647. Seminar in History of Theatre and Drama (3)**

Prerequisite: Admission to M.A. or M.F.A. theatre arts program.  
**A.** British and Continental Theatre  
**B.** American Theatre

**THEA 649. Topics in World Theatre (1-3)**

Prerequisite: Admission to M.A. or M.F.A. theatre arts program.  
 Intensive study in specific areas of world theatre. Forms, technologies, genres, cultural expressions, and contemporary developments. See *Class Schedule* for specific content. May be repeated with new content. Maximum credit six units applicable to the M.A. or M.F.A. degree in theatre arts.

**THEA 650. Seminar in Musical Theatre Dance History (3)**

Prerequisite: Admission to M.F.A. musical theatre program.  
 Study of choreographic styles of musical theatre.

**THEA 659. Musical Theatre Stage Direction (3)**

Prerequisite: Admission to M.F.A. musical theatre program.  
 Special problems in directing for the musical theatre.

**THEA 746. Theatre Internship (3) Cr/NC**

Prerequisites: Theatre 621 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**

Prerequisite: 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)**

Prerequisite: Theatre 621.  
 Faculty supervised projects leading to public presentation. Maximum credit six units.

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

Prerequisite: Project/assignment to be arranged with area adviser.  
 Individual study. Maximum credit six units applicable to a master's degree.

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

Prerequisites: An officially appointed thesis committee and advancement to candidacy. Theatre 795 (Practicum in Theatre Arts) is a prerequisite if the student elects the preparation of a project.  
 Preparation of a project report or thesis for the master's degree.

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

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.  
 Registration required in any semester or term following assignment of RP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

**THEA 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.  
 Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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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

Huma Ahmed Ghosh, Ph.D., Professor of Women's Studies,  
Chair of Department

Susan E. Cayleff, Ph.D., Professor of Women's Studies

Anne Donadey, Ph.D., Professor of French and Women's Studies

Esther D. Rothblum, Ph.D., Professor of Women's Studies

Bonnie K. Scott, Ph.D., Professor of Women's Studies

Elizabeth A. Colwill, Ph.D., Associate Professor of Women's Studies  
(Graduate Adviser)

Irene Lara, Ph.D., Associate Professor of Women's Studies

Doreen J. Mattingly, Ph.D., Associate Professor of Women's Studies

Anh N. Hua, Ph.D., Assistant Professor of Women's Studies

Kimala J. Price, 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 or on-line.

## 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. The degree will also provide a foundation for further graduate work in professional degree programs such as counseling, social work, law, and public health. It will also prepare students for teaching in a community college and other institutions of higher learning. 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 1 for the CSUMentor application and the GRE; March 1 for all other materials. 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) English language 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 Four of this bulletin.

## Specific Requirements for the Master of Arts Degree

**(Major Code: 49991) (SIMS Code: 119502)**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student, in consultation with the graduate adviser, must fulfill a three-unit language requirement selected from a foreign language, statistics, or American Sign Language. In addition, the student must complete a graduate program of 30 units with at least 21 units in women's studies to include Women's Studies 601, 602; nine units selected from Women's Studies

603, 604, 605, 606, 607, 608, 609, 610, 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. 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.

### Certificate in Women's Studies

The Department of Women's Studies offers an advanced certificate in women's studies to provide an opportunity for students to increase their understanding of women in the humanities and social sciences. The certificate program addresses diverse ways for students to develop knowledge of how women lived, thought, resisted, created knowledge, and engaged in cultural activism.

The advanced certificate requires 12 units, to include Women's Studies 590.

Nine units can be selected within an area of specialization to include six units of 600 or 700-level courses. The electives for the three specializations – International, Health and Sexualities, Gender, Race, and Class are as follows:

*International:* Women's Studies 512, 530, 565, 580, 581, 601, 603, 607, 609.

*Health and Sexualities:* Women's Studies 515, 522, 535, 565, 572, 605, 606, 608, 701.

*Gender, Race, and Class:* Women's Studies 512, 530, 535, 536, 580, 581, 601, 604, 606, 607, 608, 609.

For further information, contact the graduate adviser in the Department of Women's Studies at 619-594-6524 or visit <http://www-rohan.sdsu.edu/dept/wsweb/>.

### Courses Acceptable on Master's Degree Program in Women's Studies (WMNST)

Refer to *Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.*

#### UPPER DIVISION COURSES

##### WMNST 512. Latinas in the Americas (3)

Prerequisite: Three upper division units in women's studies.

How social and other factors impact the lives of Latin American women. Theoretical frameworks illuminate their situation. Sociocultural perspectives are offered on Latin American women's life narratives.

##### WMNST 515. Women: Myth, Ritual, and the Sacred (3)

Prerequisite: Three upper division units in women's studies.

Meanings and functions of myths and rituals in their sacred and secular aspects, emphasizing their impact on women's lives and relationships in differing cultural contexts, past and present.

##### WMNST 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)

Prerequisite: 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)

Prerequisite: Three upper division units in women's studies.

Comparative study of women's movements worldwide, including organizations, issues and initiatives. Women's diverse social/political strategies within local, national, and global contexts. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units.

##### 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)

Prerequisite: 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)

Prerequisite: 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)

Prerequisite: Three upper division units in women's studies.

Representations of women in literary, visual, and/or performing arts as well as crafts; artistic contributions of women across cultures; theories of creativity and gender. May be repeated with new content. See *Class Schedule* for specific content. Maximum credit six units.

##### WMNST 560. Women in Muslim Societies (3)

Prerequisite: 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)

Prerequisite: Three upper division units in women's studies.

Relationship of women to "modern" and "traditional" health care/healing systems in historical and cultural perspective. Representations and practices regarding the politics of women's health and illness.

##### WMNST 572. Women and Violence (3)

Prerequisite: Three upper division units in women's studies.

Forms of violence against and by women. Processes which shape women's resistance to, and collusion in, social, economic, political, and sexual violence.

##### WMNST 580. Women, Development, and the Global Economy (3)

Prerequisite: Three upper division units in women's studies.

Women's roles as agents and recipients of global economic and political change focusing on women's empowerment, work, health, and the environment. Topics include women's movements worldwide and non-governmental organizations.

##### WMNST 581. Women's Experiences of Migration (3)

Prerequisite: Three upper division units in women's studies.

Gender analysis of impact of international migration on women's lives. Identity formation, trauma, language, gender roles, and sexuality in life narratives of immigrant and refugee women. Economic and legal issues affecting immigrant and refugee women.

##### WMNST 582. Feminist Science Studies (3)

Prerequisite: 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.

## Women's Studies

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### **WMNST 590. Feminist Thought (3)**

Prerequisite: Six upper division units in women's studies.

Readings of feminist theory in historical perspective, with attention to contemporary debates in feminist scholarship.

### **WMNST 596. Topics in Women's Studies (3)**

Prerequisite: 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.

### **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)**

Prerequisite: Classified 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)**

Prerequisite: Classified graduate standing.

Examination and critique of traditional research methods; methods of critical feminist investigation; designs of research proposals.

### **WMNST 603. Seminar: Advanced Feminist Theory (3)**

Prerequisite: Classified graduate standing.

Analysis of categories of contemporary feminist theory including concepts of identity and difference; theories of subjectivity; feminist discourses, strategies, and practices.

### **WMNST 604. Seminar: Gender, Culture, and Representation (3)**

Prerequisite: Classified graduate standing.

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)**

Prerequisite: Classified graduate standing.

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)**

Prerequisite: Classified graduate standing.

Exploration of women's biographies and autobiographies. Theories of narration, identity construction, and oral and written life histories. Interconnection between self-presentation and social, historical, and multicultural institutions and discourses.

### **WMNST 607. Seminar: Privilege and Oppression (3)**

Prerequisite: Classified graduate standing.

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)**

Prerequisite: 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)**

Prerequisite: Classified graduate standing.

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 610. Seminar in Sexuality (3)**

Prerequisite: Classified graduate standing.

Sexuality and gender identity in diverse individual, social, political, and cultural contexts.

### **WMNST 611. Seminar: Gender and Diaspora (3)**

Prerequisite: Classified 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)**

Prerequisite: Classified graduate standing.

Intensive study in specific areas of women's studies, with emphasis on theoretical and methodological issues. May be repeated with new content. 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)**

Prerequisite: Classified graduate standing.

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 department graduate adviser.

Independent research in a specialized subject in women's studies.

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

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

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

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

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

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

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

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

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

### **WMNST 799C. Comprehensive Examination Extension (0) Cr/NC**

Prerequisite: Completion or concurrent enrollment in degree program courses.

Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

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# Upper Division and Graduate Topics Courses

(Also Acceptable for Advanced Degrees)

Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

The following courses are acceptable on selected advanced degree programs.

## 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: Classics 304G. For 599L: Classics 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.

## European Studies (EUROP)

In the College of Arts and Letters

### UPPER DIVISION COURSES

#### EUROP 501. European Life and Culture (3)

Prerequisite: 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.

Prerequisite: Upper division or graduate standing.

Depiction of the Nazi policy of destroying European Jewry and its impact on the perpetrators, bystanders, victims, and the post-war world in feature films.

#### EUROP 596. Topics in European Studies (3)

Prerequisite: 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.

## 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 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.

## Humanities (HUM)

In the Department of Classics and Humanities  
In the College of Arts and Letters

### UPPER DIVISION COURSES

#### HUM 504. The Early Middle Ages (3) (Same course as History 504)

Europe and Mediterranean 300-1100 C.E. through various approaches: political, economic, social, and cultural. Collapse of Roman Empire, transformation of classical culture and regions that claimed its heritage: especially the kingdoms of western Europe, but also Byzantine and Arab empires. (Formerly numbered History 404.)

#### HUM 506. The Renaissance (3) (Same course as History 506)

Intellectual, artistic, social, and economic transformation in Europe from fourteenth to seventeenth centuries.

#### 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.

## **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)**

Prerequisite: Upper division standing.

Selected topics in international business. May be repeated with new content. See *Class Schedule* for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

## **International Security and Conflict Resolution (I SCOR)**

*In the College of Arts and Letters,  
the College of Professional Studies and Fine Arts, and  
the College of Sciences*

### **UPPER DIVISION COURSE**

#### **I SCOR 575. Homeland Security (3)**

Prerequisite: 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.

## **Professional Studies and Fine Arts**

**(PSFA)**

*In the College of Professional Studies and Fine Arts*

### **UPPER DIVISION COURSES**

#### **PSFA 501. Study Abroad I (3)**

Prerequisites: Professional Studies and Fine Arts 350 and concurrent registration in Professional Studies and Fine Arts 502.

Study and practical applications of PSFA-related intercultural issues in a selected international setting. Areas of study within PSFA disciplines. Maximum credit six units.

#### **PSFA 502. Study Abroad II (3)**

Prerequisites: Professional Studies and Fine Arts 350 and concurrent registration in Professional Studies and Fine Arts 501.

Study and practical applications of PSFA-related intercultural issues in a selected international setting. Areas of study within PSFA disciplines. Maximum credit six units.

#### **PSFA 550. International Studies Capstone (3)**

Prerequisites: Professional Studies and Fine Arts 501 and 502.

Comparative exploration of the ways visited culture/society/nation addresses a problem or issue relative to approaches taken in US.

## **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)**

Prerequisite: 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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# PART SIX

## University Policies

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# University Policies

## 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. All students beginning graduate study at San Diego State University after August 2011 will be required to follow the procedures and regulations stated in the 2011-12 edition of the *Graduate Bulletin*.

If you were admitted to a graduate degree curriculum at SDSU prior to that date and have been enrolled in one or more courses during each consecutive semester since first enrolling as a graduate student, or if your attendance has not been interrupted by more than two consecutive semesters, you will be held responsible for the regulations in effect at the time the official master's degree program of study is approved.

## Changes in Rules and Policies

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

Nothing in this catalog 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 catalog does not constitute a contract or the terms and conditions of a contract between the student and San Diego State University or the California State University. The relationship of the student to San Diego State University is one governed by statute, rules, and policy adopted by the legislature, the trustees, the chancellor, the president and their duly authorized designees.

## Privacy Rights of Students in Education Records

The federal Family Educational Rights and Privacy Act of 1974 (20 U.S.C. 1232g) and regulations adopted thereunder (34 C.F.R. 99) 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 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, 400 Maryland Avenue, SW, Washington, D.C. 20202-5920.

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, e-mail address, photograph, place and date of birth, grade level, enrollment status, 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, Ethnicity, National Origin, Age, and Religion

The California 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, ethnicity, national origin, age, or religion 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

The California State University does not discriminate on the basis of disability in admission or access to, or treatment or employment in, its programs and activities. Federal laws, including sections 504 and 508 of the Rehabilitation Act of 1973 and 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, gender identity or expression, 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 athletic director of compliance, 619-594-3395, or to the regional director of the Office for Civil Rights, United States Department of Education, 50 Beale Street, Suite 7200, San Francisco, CA 94105.

The California State University is committed to providing equal opportunities to all 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 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

#### Definition of Grades for Undergraduate Students

Grades and grade points per unit used in reporting are as follows: Grade of **A** (outstanding achievement; available only for the highest accomplishment), 4 points; **B** (praiseworthy performance; definitely above average), 3 points; **C** (average; awarded for satisfactory performance; the most common undergraduate grade), 2 points; **D** (minimally passing; less than the typical undergraduate achievement), 1 point; **F** (failing), 0 points; **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.

#### Definition of Grades for Graduate Students

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

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

#### Computation of Grade Point Average

To compute the grade point average, the total number of grade points earned is divided by the number of units attempted. Units earned with a Cr (Credit) are not included in the computation. A grade of I (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. The minimum GPA for a bachelor's degree is 2.0 (C); in other words, you must have earned at least twice as many grade points as units attempted.

#### 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

## University Policies

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year except for graduate thesis (799A) or dissertation (899). 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 10 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.

Dropping a class is not permitted after 11:59 p.m. on the 10th 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 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. Only those retroactive changes from an assigned grade to a W which are approved by the instructor who assigned the original grade will be made, except that (a) the dean or designee of the college of your major may authorize the change of WU to W, and (b) department chairs shall act on behalf of instructors no longer affiliated with the university.

### Auditing – AU

Enrollment as an auditor is subject to permission of the instructor, provided that enrollment in a course as an auditor shall be permitted only after students otherwise eligible to enroll on a credit basis have had an opportunity to do so. Auditors are subject to the same fee structure as credit students and regular class attendance is expected. Failure to meet required class attendance may result in an administrative drop of the course. 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 11:59 p.m. on or before the 12th class day of instruction to the Office of the Registrar. Once enrolled as an auditor, you may not change to credit status unless such a change is requested by 11:59 p.m. prior to the end of the 12th class day of instruction. If you are enrolled for credit, you may not change to audit after 11:59 p.m. on the 12th class day of instruction.

### Credit/No Credit - Cr/NC (Graduate Student Option)

Graduate students may not take a course listed on their program of study for a 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 the graduate curriculum 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 your 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 you 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 you could make up the work would be to attend a major portion of the class when it is next offered. Contract forms for Incomplete grades are available at department offices or the Office of the Registrar Web site at <http://www.sdsu.edu/registrar>.

Failure to complete the assigned work within one calendar year will result in an Incomplete being converted to an "IC" symbol, which would become the final grade on 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 you 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

Faculty have the right and responsibility to provide evaluation and timely assignment of appropriate grades. There is a presumption that grades assigned are correct. It is the responsibility of anyone appealing an assigned grade to demonstrate otherwise.

If you believe that an appropriate grade has not been assigned you should first seek to resolve the matter with the instructor of record. If the matter cannot be resolved informally, you may present the case to the appropriate campus entity, have it reviewed and, where justified, receive

a grade correction. It is your 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 you have graduated, no grade change will be considered.

## 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. Any more than one repeated WU will be calculated into 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.**

## Schedule Adjustment

Schedule adjustment include: dropping a class, adding a class, adding or reducing units of a class for which the student is already registered, changing a section of the same class, withdrawing from the university, or changing grading options. Students should check their online schedules regularly and take necessary action to add or drop during the schedule adjustment period. Students who do not attend a class and who do not ensure that the course is officially dropped in the WebPortal at <http://www.sdsu.edu/portal>, will receive a failing grade. Schedule adjustments are accepted until 6 p.m. on the following dates:

### Fall 2011 Semester

Drop classes by 11:59 p.m. on September 12.

Add classes by 11:59 p.m. on September 14.

### Spring 2012 Semester

Drop classes by 11:59 p.m. on January 31.

Add classes by 11:59 p.m. on February 2.

Students are responsible for every course in which they are registered. If students do not attend the first class meeting of the semester and are not present at the start of the second meeting, the professor may give the place to another student. If this occurs, the student has forfeited the place and may be dropped from the course by the instructor within the first eight class days of the semester. The instructor may request that you personally take formal action to drop the class. **Not all instructors will drop students who miss the first class session and the beginning of the second class session.**

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

## Final Examinations

No final examination shall be given to individual students before the regular time. If you find it impossible to take a final examination on the date scheduled you 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.

## 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 an 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 find it necessary to cancel their registration or to withdraw from the university after enrolling for any academic term must initiate action formally through the Office of the Registrar and 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.

A student who has not paid fees and is not enrolled in at least one class (other than for audit) by 11:59 p.m. on the 12th class day of the semester is no longer considered a continuing student and may be required to apply for readmission.

A course will not appear on the permanent record if withdrawal occurs before the end of the 10th class day of the semester by 11:59 p.m. After the 10th 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.

### Withdraw Retroactively

After the last day of instruction for a term, 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.

### Unofficial Withdrawal

If you withdraw unofficially from classes or from the university, you will receive failing grades in all courses that you stop attending. An unofficial withdrawal is one in which you stop 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 undergraduate and graduate students may stop out of the university one semester in a calendar year and maintain their continuing student status. Continuing status includes the maintenance of catalog requirements for graduation. Disqualified students, students absent for more than one semester without an approved leave of absence, and those who attend another institution for more than one semester must apply for readmission should they wish to return to San Diego State University. 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 take 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 academic calendar 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 undergraduate 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.

#### Military Called to Compulsory Service

For information about the policy for Military Called to Compulsory Service, contact the SDSU Veterans Center at 619-594-5813.

### 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.

### Probation and Disqualification

#### Academic Probation (Grade Point Average Deficiency)

A post-baccalaureate 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 additional grade point average requirements for degree seeking students.

#### Academic Disqualification (Grade Point Average Deficiency)

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 during the first semester on probation the student does not achieve a term GPA of a 2.85 or higher, the student will be disqualified from San Diego State University. If during the first semester on probation the student earns a term GPA of 2.85 or better in San Diego State University coursework, but still has an overall GPA less than 2.85, the student will continue on academic probation for a second semester. If at the end of the second semester a student fails to achieve a cumulative GPA of 2.85, the student will be subject to academic disqualification from further attendance at the university. If at the end of the second semester the student has attained a 2.85 average or better on all work attempted at San Diego State University, academic probation will be lifted.

#### Reinstatement of Academically Disqualified Students

Graduate students who are academically 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 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 Disqualification

Departments or schools of the university may recommend that the graduate dean dismiss from the program 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 other than GPA. Students will be notified when they are subject to dismissal from the major and given a chance to respond in writing. If the department or school decides to proceed with the administrative disqualification, they will notify the graduate dean of the decision and the student will be disqualified and officially removed from the major at the end of the semester. Examples of unsatisfactory performance include but are not limited to: withdrawal from all or a substantial portion of a program of studies in two successive terms or in any three terms, failure to adhere to professional standards (see section on Standards for Professional Graduate Student Conduct), failure to make normal progress toward the degree, failure to fulfill conditions for fully classified admission within the time specified, denial of advancement to candidacy for a degree, and failure in presentation of a thesis or comprehensive examination.

Upon the dean's issuance of disqualification, the student's status will become undeclared and the student will become ineligible to enroll in coursework from his or her program. If the student wishes to apply to another San Diego State University graduate program, the information regarding his or her dismissal will be included with the application materials forwarded to the new program prior to an admission decision. Unless a student has been accepted to a new graduate program by the end of the semester following dismissal, the student will be ineligible for registration and will need to reapply to the university if she or he wishes to return to the university.

### Student Conduct

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.**

(a) Campus Community Values

The university is committed to maintaining a safe and healthy living and learning environment for students, faculty, and staff. Each member of the campus community should choose behaviors that contribute toward this end. 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) Grounds for Student Discipline

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.

The following are the grounds upon which student discipline can be based:

(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 one's self 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 or, 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) 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.

### (d) 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.

### 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.

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

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

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

## SDSU Alcohol and Substance Abuse Policies

**In accordance with the California Information Practices Act, the Vice President for Student Affairs or designee of San Diego State University may notify a student's parent(s) or legal guardian(s) in the event compelling circumstances exist affecting the student's health or safety, including circumstances involving alcohol or controlled substances.**

This statement is presented to students to provide information about (1) health risks associated with alcohol and other drugs, (2) prevention and treatment programs available on campus, and (3) applicable State laws and campus policies.

### Risks

Use and abuse of alcohol and other drugs can lead to accidents, injury, and other medical emergencies. Alcohol, especially in high doses, or when combined with medications or illegal drugs continues to claim the lives of college students across the nation. If you see someone unconscious, call 9-1-1-; doing so may save his or her life.

Driving after consumption of even relatively small quantities of alcohol can substantially increase your risk of crash involvement. Even after just a drink or two, drinkers may experience some loss of their ability to think about complex problems or accomplish complex tasks. Drinkers may also lose some control over impulsive behavior.

To become dependent upon chemicals such as alcohol and/or illicit drugs is to put your health and life at risk. Chemical dependency is a condition in which the use of mood altering substances, such as drugs or alcohol, affect any area of life on a continuing basis. Medical research has established very strong evidence that alcohol abuse contributes significantly to cancer and heart disease. Many illicit drugs have also been demonstrated to lead to serious short and long-term health problems. There is clear evidence of serious negative effects on babies due to use of illicit drugs and alcohol by the mother during pregnancy.



### Campus Resources

Keeping yourself informed is an important step in developing a healthy lifestyle and in knowing how to cope with problems as they arise. SDSU provides useful and informative prevention education programs throughout the year. A variety of departments sponsor workshops and lectures on alcohol and drug related issues to support and encourage healthy, productive lifestyles. These programs are available through: Counseling and Psychological Services, 619-594-5220; Residential Education Office, 619-594-5742; Alcohol and Other Drug Initiatives, 619-594-4133; Athletic Department, 619-594-3019; Student Health Services, 619-594-5281; University Police, 619-594-1991.

For students with substance abuse problems or concerns, assistance is available at SDSU's Counseling and Psychological Services (CPS) located in Calpulli Center, Room 4401. Students who prefer an appointment with a health care provider (e.g. nurse or physician), may contact Student Health Services. If you are aware of problems with friends, roommates, or family members, we encourage you to act responsibly by consulting with Counseling and Psychological Services. Remaining silent or waiting until a situation has escalated is not responsible behavior. SDSU supports the notion of students helping one another to cooperatively solve alcohol and substance abuse problems as they occur.

### Laws and Campus Policy

With few exceptions, it is illegal for anyone under the age of 21 to purchase or possess alcohol. If you violate these laws you may face a fine of \$250 and suspension of your driving license. For more information about California laws visit the California State Bar Web site at [http://www.calbar.ca.gov/calbar/pdfs/cbj/kids\\_and\\_the\\_law.pdf](http://www.calbar.ca.gov/calbar/pdfs/cbj/kids_and_the_law.pdf) or the California Alcohol Beverage Control Web site at <http://www.abc.ca.gov/teencorner.html>.

Federal and State laws define a number of substances as "drugs" with sanctions related to their manufacture, sale, possession, and use varying by type of substance and quantity. See California State Bar Web site at [http://www.calbar.ca.gov/calbar/pdfs/cbj/kids\\_and\\_the\\_law.pdf](http://www.calbar.ca.gov/calbar/pdfs/cbj/kids_and_the_law.pdf).

In addition to the Standards for Student Conduct in the California Code of Regulations, Title V, Article 2, Section 41301, SDSU's expectations of responsible student behavior prohibits the unlawful possession, use, or distribution of drugs and alcohol by students on university property or in surrounding neighborhoods, or as any part of the university's activities. Violators may face suspension or expulsion from the university. In addition, the university will cooperate with governmental authorities in criminal and civil actions. The university does not accept alcohol or substance abuse as an excuse, reason, or rationale for any act of abuse, harassment, intimidation, violence, or vandalism.

Possession or consumption of distilled liquor on university property is prohibited at all times. Possession, consumption, or sale of beer or wine by those 21 years of age or older is permitted at designated campus locations and events only with prior approval of the vice president for student affairs.

On campus property, the sale, distribution, knowing possession, and use of dangerous drugs or narcotics are prohibited. You are also forbidden by State and Federal laws to sell, distribute, possess, or use those drugs.

Student organizations, residence halls, athletics, and Greek Life have instituted additional policies regarding alcohol and drugs. Please contact relevant administration offices for more information. More information can also be found at <http://aod.sdsu.edu>.

As a student at SDSU, you are responsible for your behavior and are fully accountable for your actions. Violation of this policy statement will not go unchallenged within the SDSU community. Any university student may be expelled, suspended, or placed on probation for violating university regulations regarding alcohol or drugs. Additionally, using alcohol or drugs negatively affects your academic performance.

Students who possess, use, or distribute substances such as, but not limited to, marijuana, cocaine, methamphetamines, or other hallucinogens and narcotics, or who violate statutes regarding alcoholic beverages, are subject to arrest, imprisonment, or a fine according to State law. The University Police Department is empowered to enforce all State and Federal laws, including public drunkenness, driving under the influence, and possession of alcohol by a minor.

The university's commitment to exercising disciplinary powers in cases of illegal alcohol and drug use complements its full measure of support for students who seek help for themselves or their acquaintances. These two approaches, combined with an active prevention education program, provide a strong basis for maintaining university expectations for a safe, healthy, and productive campus community. We hope that you will take advantage of the programs and services available to you, and that you will join with us in creating a viable learning community.

### Drug Law Violations and Consequences

A federal or state drug conviction for possession, sale, or conspiring to sell illegal drugs can affect a student's eligibility to receive federal student financial aid, including loans, grants, and work study. If the offense occurs while the student is receiving federal student financial aid, the student will lose aid eligibility for a certain period of time. Additional information is available from the Office of Financial Aid and Scholarships, Student Services, Room 3605, 619-594-6323, or at <http://www.sdsu.edu/financialaid>.

### SDSU Smoke Free Policy

This policy implements CSU Executive Order 599, in accordance with Education Code 89031.

Smoking is prohibited in all San Diego State University buildings or leased spaces and motor pool vehicles.

Smoking is prohibited in those outdoor areas which are either connected to or in close proximity of SDSU buildings or leased space if the smoke can readily enter the building through open doors, windows, or ventilation system intakes.

Smoking is prohibited in outdoor areas immediately adjacent to SDSU owned or leased food establishments unless designated as a smoking area, consistent with the overall goals of this policy; smoking is prohibited in outdoor SDSU owned or leased constructed seating areas where people are likely to congregate, unless designated as a smoking area.

The success of this policy depends upon the thoughtfulness, consideration, and cooperation of everyone. Deans, directors, and department chairs are responsible for implementing this policy. The associate vice president for faculty affairs and the director of the Center for Human Resources are available to assist in the policy interpretation and to ensure its consistent application.

To aid persons desiring to stop smoking, the university offers smoking cessation programs for students through Student Health Services and for faculty and staff through the Center for Human Resources.

The SDSU auxiliary organizations shall operate in conformity with this campus policy.

### Safety and Security Report

In accordance with the requirements of the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act, the San Diego State University Safety, Security and Fire Report and current annual crime statistics are available online at <http://www.police.sdsu.edu>. Call the University Police Crime Prevention Unit at 619-594-1985 for more information.

### 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 Vice President for Research in Graduate and Research Affairs for referral to the appropriate college dean.

### Transcripts of Record

#### Official Transcripts

Official transcripts can be ordered online in your SDSU WebPortal at <http://www.sdsu.edu/portal> under the Official Transcript section. If all your coursework was completed prior to 1987 or if your transcript requires special handling (e.g. via United States Postal Service Priority or Express Mail only), 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 mailed within five to seven 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

You may print an unofficial SDSU transcript by accessing the SDSU WebPortal at <http://www.sdsu.edu/portal>. If all of your SDSU coursework has been taken since fall 1987, your entire record will be available on the Web. If you completed coursework at SDSU prior to fall 1987, you must contact the Office of the Registrar to obtain an unofficial transcript reflecting that portion of your record. Unofficial transcripts do not bear the seal of the university and are not suitable for transfer purposes.

### 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.

#### 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 Regulatory Affairs degree, Master in Biomedical Quality Systems degree, Master of Science in Nursing degree which permits 12 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 Program Credit

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.

### Non-Credit Courses

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.

### Availability of 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 and for San Diego State University Students participating in study abroad programs;
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;
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 and conditions of any loan received as part of the student's financial aid package, sample loan repayment information, the necessity for repaying loans, and terms and conditions under which students may obtain loan deferments; and
7. The general conditions and terms applicable to any employment provided as part of the student's financial aid package.

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 tuition and fees; 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 Student Account Services, Student Services 2536, 619-594-5253, or at <http://www.sdsu.edu/sas>.

Information concerning policies regarding the return of federal Title IV student assistance funds as required by regulation is available from Student Account Services, Student Services, Room 2536, 619-594-5253, or at <http://www.sdsu.edu/sas>.

Information concerning loan exit counseling for all student borrowers under the federal student loan programs is available from Student Account Services, Student Services, Room 2536, 619-594-5253, or at <http://www.sdsu.edu/sas>.

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.sa.sdsu.edu/sds>.

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 Analytic Studies and Institutional Research, Manchester Hall, Room 3310, 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, Education and 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>.

# **SDSU**

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# ADDENDA

The California State University

Index

SDSU Campus Map

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

Academic excellence has been achieved by the California State University through a distinguished faculty whose primary responsibility is superior teaching. While each campus in the system has its own unique geographic and curricular character, all campuses, as multipurpose institutions, offer undergraduate and graduate instruction for professional and occupational goals as well as broad liberal education. All 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 high-quality, affordable bachelor's and master's level degree programs. 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.

Enrollment in fall 2009 totaled 433,000 students, who were taught by more than 21,000 faculty. The system awards about half of the bachelor's degrees and a third of the master's degrees granted in California. More than 2.5 million students have graduated from CSU campuses since 1961.

A recent economic report found that the CSU supports more than 150,000 jobs statewide, annually. The engine driving job creation is more than \$17 billion in economic activity that directly results from CSU-related spending that generates \$5.43 for every dollar the state invests. For more information, please see [www.calstate.edu/impact](http://www.calstate.edu/impact).

## Average Support Cost Per Full-time Equivalent Student and Sources of Funds

The total support cost per full-time equivalent student (FTES) 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. The total CSU 2010-11 budget amounts were \$2,617,435,000 from state General Fund appropriations (not including capital outlay funding), \$1,244,603,000 from net basic tuition fee revenue, and \$320,211,000 from other fee revenues and reimbursements for a total of \$4,182,249,000. The number of projected 2010-11 full-time equivalent students (FTES) is 339,873 resident and 14,509 non-resident students. 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 2010-11 average support cost per full-time equivalent student based on General Fund appropriation and net basic tuition fee revenue only is \$11,213 and when including all sources as indicated below is \$12,117. Of this amount, the average net basic tuition fee revenue and other income and reimbursements per FTES is \$4,416, which includes all fee revenue in the CSU Operating Fund (e.g. tuition fees, application fees, other miscellaneous fees, and reimbursements).

The average CSU 2010-11 academic year, resident, undergraduate student basic tuition fee and other mandatory fees required to apply to, enroll in, or attend the university is \$5,285. 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.

2010-11	Amount	Average Cost Per FTE	
		Student	Percentage
Total Support Cost	\$4,182,249,000	\$12,117	100%
–State Appropriation <sup>1</sup>	2,617,435,000	7,701	64%
–Net Basic Tuition Fee Revenue <sup>2</sup>	1,244,603,000	3,512	29%
–Other Income and Reimbursements <sup>2,3</sup>	320,211,000	904	7%

<sup>1</sup> State Appropriation includes a decrease of \$106 million reflecting a shift of costs on a one-time basis to the federal American Recovery and Reinvestment Act State Fiscal Stabilization Fund.

<sup>2</sup> Net Basic Tuition fee revenue and other income represents campus 2010-11 budgets submitted November 2010.

<sup>3</sup> Other income and reimbursements represent campus "other fee" 2010-11 final budget revenues submitted, as well as reimbursements in the CSU Operating Fund.

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Dr. Hamid Shirvani, President  
209-667-3122 • [www.csustan.edu](http://www.csustan.edu)

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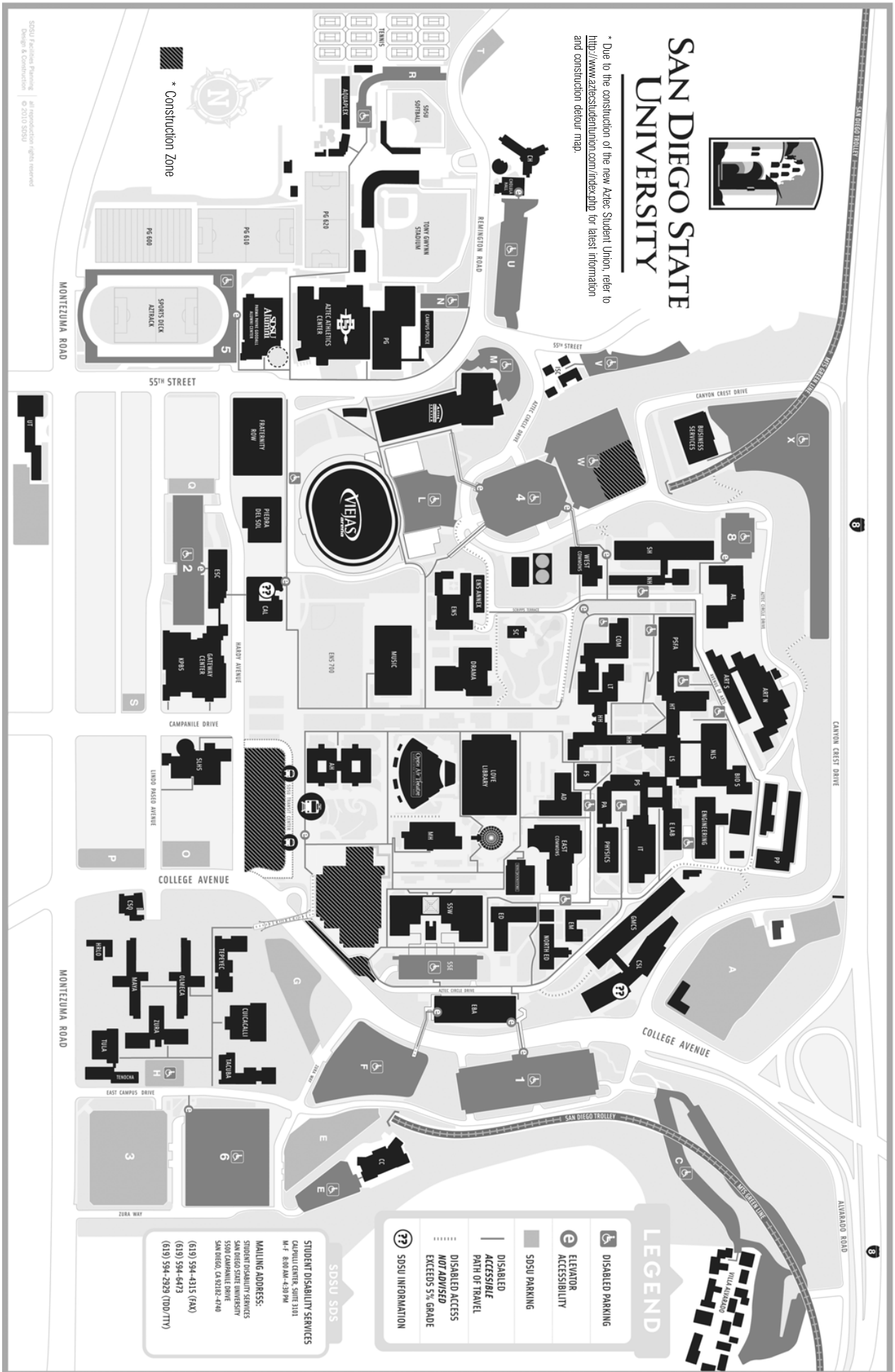
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**MAILING ADDRESS:**  
 STUDENT DISABILITY SERVICES  
 SAN DIEGO STATE UNIVERSITY  
 5500 CAMPANELLE DRIVE  
 SAN DIEGO, CA 92182-2400

(619) 594-4315 (FAX)  
 (619) 594-6473  
 (619) 594-2929 (TDD/TTY)

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Curriculum: Stephanie Samuels and Karen R. Tom

Bulletin production: Kristina Velarde and Drew Little

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## **General Catalog, Graduate Bulletin, and Class Schedule**

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