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.
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
http://www.rohan.sdsu.edu/~anthro/

Faculty
Seth W. Mallios, Ph.D., Professor of Anthropology,
Chair of Department
Joseph W. Ball, Ph.D., Distinguished Professor of Anthropology
Elsa J. Sobol, Ph.D., Professor of Anthropology
Ramona L. Pérez, Ph.D., Associate Professor of Anthropology
(Graduate Adviser)
Frederick J. Conway, Ph.D., Assistant Professor of Anthropology
Matthew T. Lauer, Ph.D., Assistant Professor of Anthropology
Arion T. Mayes, Ph.D., Assistant Professor of Anthropology
Erin P. Riley, Ph.D., Assistant Professor of Anthropology

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

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

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

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

Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee.
All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Anthropology.

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

Department of Anthropology
5500 Campanile Drive
San Diego, CA 92182-4443

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

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

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

(1) Three letters of recommendation (in sealed and signed envelopes) from persons in a position to judge academic ability;
(2) One typewritten example of academic writing (research term paper, etc.).

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy as described in Part Four of this bulletin. In addition, the department requires for either the General Anthropology specialization or the Applied Anthropology specialization that the student must have a thesis adviser, formed a thesis committee, and written a thesis proposal that has been approved by their thesis committee. The committee can be formed after (1) successful completion of 12 units from the core seminars, depending on area of specialization (Anthropology 601, 602, 603, 604, or 605) with a minimum grade point average of 3.0 and no less than a grade of B in each of the seminars; and (2) according to the specific recommendation of the Department of Anthropology, passed either an examination demonstrating working knowledge of an appropriate foreign language, or completed a sequence of at least one lower division and one upper division course (with a grade point average of 2.5 or better) in either a foreign language or statistics. The statistics requirement may be satisfied by taking one of the following sequences in statistics: Biology 215; Sociology 201 and 406 or 407; or Statistics 250 and 350A or equivalent.
Anthropology

Specific Requirements for the Master of Arts Degree

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

In addition to meeting the basic requirements for the Master of Arts degree as described in Part Four of this bulletin, students selecting the General Anthropology specialization (SIMS Code: 110940) must complete a graduate program of at least 33 units of which at least 21 units must be in 600- and 700-numbered courses in anthropology, to include:

1. Anthropology 601, 602, 603, 604 (with minimum grade point average of 3.0 and no less than a grade of B in each of these core seminars). Only classified students may enroll in these courses;
2. Anthropology 580;
3. One of the following methods courses: Anthropology 520, 531, 560, 561 or 505;
4. Anthropology 797, Research (to be taken after approval of thesis proposal by full committee);

No more than three units of Anthropology 798, Special Study, may be used toward satisfaction of the degree as listed in the program of study. Students selecting the Applied Anthropology specialization (SIMS Code: 110910) must complete a graduate program of at least 33 units of which at least 21 units must be in 600- and 700-numbered courses in anthropology, or with the approval of the graduate coordinator, in related disciplines to include:

1. Nine units selected from Anthropology 601, 602, 603, 604 (with minimum grade point average of 3.0 and no less than a grade of B in each of these core seminars). Only classified students may enroll in these courses;
2. Anthropology 605 (with no less than a grade of B);
3. Anthropology 580;
4. One of the following methods courses: Anthropology 520, 531, 560, 561 or 505;
5. Anthropology 795, Internship (must be approved by the graduate coordinator);
6. Anthropology 797, Research (to be taken after approval of thesis proposal by full committee);

No more than three units of Anthropology 798, Special Study, may be used toward satisfaction of the degree as listed in the program of study. All graduate students must present their thesis research as an oral examination on the general field of the thesis with all committee members present as a requirement for the degree. Only Plan A, requiring the thesis, is permitted for the Master of Arts degree in anthropology.

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)
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 522. Economic Anthropology (3)
Prerequisite: Anthropology 303.
Integrates analyses of production, distribution, and consumption of goods and services with study of cultures. Interrelated economic, social, and cultural thought; classifications of disparate economies and reciprocity.

ANTH 523. Anthropology of Politics and Power (3)
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.
Study of childhood across 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 field supervisors. 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)
Two lectures and three hours of laboratory.
Prerequisites: At least one of the 300-level courses (Anthropology 301, 302, 303, or 304) and a statistics course. Application of palynology, paleontology, and relevant technologies. Analysis of archaeological data sets. Special section of the SPSS computer workshop is required.

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)
Prerequisites: Classified graduate standing and 12 upper division units in anthropology. 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: Twelve upper division units in anthropology. History and theory in archaeological data collection, analysis, and interpretation.

ANTH 603. Seminar in Ethnology (3)
Prerequisite: Twelve upper division units in anthropology. History and theory in ethnology stressing the significant literature on such topics as cross-cultural comparison, structural-functional analysis and description, personality and culture, and sociocultural change.

ANTH 604. Seminar in Linguistics (3)
Prerequisite: Twelve upper division units in anthropology. History and theory of linguistics stressing the significant literature on such topics as cultural cognition, descriptive linguistics, lexicostatistics, and transformational analysis.

ANTH 605. Seminar in Applied Anthropology (3)
Prerequisite: Nonconditional graduate standing in anthropology. Use of anthropological theory and methods in solving contemporary social problems. Contemporary ethnographic examples from differing regions of the world reviewed to understand complexity and locally specific variables that must be addressed in proposing interventions and solutions.

ANTH 621. Seminar in Topical Anthropology (3)
Prerequisite: Twelve upper division units in anthropology. Study of a major subdiscipline such as political anthropology, economic anthropology, social anthropology, psychological anthropology, cultural ecology, applied anthropology, race and variation, or environmental archaeology. Maximum credit six units applicable to a master’s degree. May be repeated with new content. See Class Schedule for specific content.

ANTH 795. Internship in Anthropology (3-9) Cr/NC
Prerequisites: Classified graduate standing and consent of instructor. Students assigned to various government and private agencies in which anthropological theory can be applied. Supervision shared by department supervisor and on-the-job supervisor. Maximum credit nine units; three units applicable to a master’s degree.

ANTH 797. Research (3) Cr/NC/RP
Prerequisite: Advancement to candidacy. Independent investigation in the general field of the thesis.

ANTH 798. Special Study (1-3) Cr/NC/RP
Prerequisite: Classified graduate standing. Individual study directed toward the preparation of a paper on a specific problem. May be repeated with variable content, with a maximum credit of three units applicable to a master’s degree.

ANTH 799A. Thesis (3) Cr/NC/RP
Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master’s degree.

ANTH 799B. Thesis Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis, 799A, with an assigned grade symbol of RP. Registration required in any semester or term following assignment of RP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

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

OFFICE: Art 505
TELEPHONE: 619-594-6511 / FAX: 619-594-1217
E-MAIL: artinfo@mail.sdsu.edu
http://www.sdsu.edu/art

Faculty
Arthur L. Olman, M.F.A., Professor of Art, Design, and Art History, Director of School
Richard J. Baker, M.F.A., Professor of Art, Design, and Art History, Emeritus
Jo-Anne Berelowitz, Ph.D., Professor of Art, Design, and Art History (Graduate Adviser, Art History)
Richard A. Burkett, M.F.A., Professor of Art, Design, and Art History
Joanne Hayakawa, M.F.A., Professor of Art, Design, and Art History
Wendy L. Maruyama, M.F.A., Professor of Art, Design, and Art History
Helen Z. Shirk, M.F.A., Professor of Art, Design, and Art History
Susan C. Merritt, M.A., Professor of Art, Design, and Art History
Kerry A. Nelson, M.S., Professor of Art, Design, and Art History
Ida K. Rigby, Ph.D., Associate Professor of Art, Design, and Art History
Tina Marie Siprut, 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
Jo-Anne Berelowitz, Ph.D., Professor of Art, Design, and Art History (Graduate Adviser, Studio Arts)
Hiroko Johnson, Ph.D., Associate Professor of Art, Design, and Art History
Richard C. Keely, M.F.A., Associate Professor of Art, Design, and Art History (Graduate Adviser, Studio Arts)
Robert A. Mansfield, M.F.A., Associate Professor of Art, Design, and Art History
Kotaro Nakamura, M.A., Associate Professor of Art, Design, and Art History
Sandra Lee Sherman, M.F.A., Associate Professor of Art, Design, and Art History
Mark J. Siprut, M.F.A., Associate Professor of Art, Design, and Art History
Kim Stringfellow, M.F.A., Associate Professor of Art, Design, and Art History
Nancy Deffebach, Ph.D., Assistant Professor of Art, Design, and Art History
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) TOEFL score, if medium of instruction was in a language other than English (http://www.ets.org. SDSU institution code 4682).
Master of Fine Arts Degree in Art
Master of Arts (Studio Arts) Degree in Art

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

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

(1) School of Art, Design, and Art History application form. Contact the School of Art, Design, and Art History to obtain application form and instructions or refer to http://www.sdsu.edu/art to download the information;

(2) Statement of purpose addressing your professional goals and reasons for selecting the School of Art, Design, and Art History at SDSU for your pursuit of these goals;

(3) Artist statement which describes the nature or content of the work shown in the portfolio;

(4) Slides, photos or digital images of your work. All slides must be accompanied by a corresponding slide description sheet. All digital images must be accompanied by a printed thumbnail index. Digital images should not exceed 1024 x 768 pixels, and should be presented either as a collection of JPEG files in a folder along with a caption list, or as captioned images contained within a single PDF or with PowerPoint. Printed digital image samples are encouraged, but must be accompanied by disc in the above stated formats;

(5) Two letters of recommendation from art instructors (or others) who are able to comment on your artistic potential in the area of specialization. Letters can be sent separately or included with your application in sealed and signed envelopes;

(6) Any other materials required specifically in the instructions by your chosen discipline;

(7) Return envelope with sufficient postage for the return of your portfolio.

Master of Arts (Art History) Degree in Art

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

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

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

(2) Statement of purpose addressing your professional goals and reasons for selecting the School of Art, Design, and Art History at SDSU for your pursuit of these goals, what you plan to accomplish at SDSU (in which areas do you plan to specialize), and what you 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.

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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. These 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 art 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 press 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 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 electro-forming. 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 IIIA-Jewelry (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: Grade of C (2.0) or better in Art 340, or Art 240 and 407. Visual communication and expression using photographic media, including photomechanical and digital processes. Preparation for multimedia and digital prepress. Maximum credit six units with consent of instructor.

ART 541. Graphic Design IV (3)
Six hours.
Prerequisites: Grade of C (2.0) or better in Art 399A, 399B, 399C, 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.

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.

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 446, or 540.

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.

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 with consent of instructor.

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.

ART 553. Interior Design V (3)
Six hours.
Prerequisite: Art 552. Proof of completion of prerequisite required: Copy of transcript.

ART 554. Emerging Technologies in Multimedia (3)
Six hours.
Prerequisite: Grade of C (2.0) or better in Art 344A, or 348, or 440, or 446, 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 555. 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 567. 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 568. Art of Sub-Saharan Africa (3)
Prerequisite: Art 258 or 259 or 263.
Form and content of the art of Sub-Saharan Africa viewed within its cultural context.

ART 570. Art of the Pacific Islands (3)
Prerequisite: Art 258 or 259 or 263.
Visual arts of the Pacific Islands; recognition of styles and object types and their historical, social, and cultural contexts.

ART 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 globalization.

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 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 consultation 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 consultation 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 665. Seminar in Japanese Art History (3)
Prerequisite: Art 565 or 566.
Selected topics in visual arts and criticism of various Japanese art schools from seventeenth to twentieth centuries. May be repeated with new content.
Maximum credit six units applicable to a master’s degree.

ART 691. Curatorial Practice (3)
Six hours.
Prerequisites: Art 578 and 591.
Practical experience in curatorialship 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
E. Studio Art in Graphic Design
F. Studio Art in Environmental/Interior Design
G. Studio Art in Jewelry/Metals
H. Studio Art in Furniture
I. 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
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Soonja Choi, Ph.D., Professor of Linguistics
Lei Guang, Ph.D., Professor of Political Science
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Mei Zhong, Ph.D., Associate Professor of Journalism and Media Studies
Andrew J. Abalahin, Ph.D., Assistant Professor of History
Wilburn N. Hansen, Ph.D., Assistant Professor of Religious Studies
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 program is designed to offer systematic advanced training for those planning to enter educational, business, government, or community service involving Asian and Paciﬁc studies; 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 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) TOEFL 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.
Asian Studies

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

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

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

ASIAN 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.
The campus library has a very extensive collection of astronomical texts, both student instruction and public outreach programs. The central photometer are also available. A Spitz AP3 planetarium is used for Meade LX200 reflectors, and 20 smaller assorted portable reflecting permanently fixed 12-inch reflecting telescopes, ten portable 8-inch computer Center.

extensive campus computing facilities and to the San Diego Super-

several UNIX workstations with various storage units and laser printers for image processing of astronomical data. Departmental PCs and outreach programs. Students make use of observatory facilities in support of their thesis research.

Mount Laguna Observatory

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

Jerome A. Orosz, Ph.D., Associate Professor of Astronomy

(Graduate Adviser)

William F. Welsh, Ph.D., Associate Professor of Astronomy

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

Robert W. Leach, Ph.D., Resident Astronomer

Graduate teaching associateships in astronomy are available to a few qualified students. A limited number of graduate research assis-
tantships 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 photovoltaic 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 Supercomputer Center. Campus facilities include a Clark 12-inch refractor, two permanently fixed 12-inch reflecting telescopes, ten portable 8-inch Meade LX200 reflectors, and 20 smaller assorted portable reflecting telescopes. Two CCD cameras, a CCD-equipped spectrograph, and photometer are also available. A Spitz AP3 planetarium is used for both student instruction and public outreach programs. The central campus library has a very extensive collection of astronomical texts and journals. In addition, the Special Collections section contains the world-renowned Zinner Collection of rare and historically important astronomical texts. The department also maintains a resource room of astronomical catalogs, 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.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. In addition, students must have an overall grade point average of at least 2.85 in the last 60 units of their undergraduate work and must have preparation in astronomy and/or related sciences substantially equivalent to that required for the bachelor’s degree in astronomy at San Diego State University.

Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee. All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Astronomy.

Graduate Admissions

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

Graduate Admissions

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

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

Note:

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

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

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

Department of Astronomy

The following materials should be mailed or delivered to:

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

(1) Letters of reference (two or three);

(2) Personal statement;

(3) Application for teaching associate position or graduate assistantship (if desired).
Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as specified in Part 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:

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

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 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.
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/shls/audmain.php

Director of School: Beverly B. Wulfeck, Ph.D.

Faculty
The following faculty members of the cooperating institutions participate in the Au.D. program. These faculty teach courses, provide clinical instruction, conduct 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, 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.
- Peter Torre, III, Ph.D., Associate Professor of Speech, Language, and Hearing Science and Director of Program (Graduate Adviser)
- Laura Dreisbach Hawe, Ph.D., Associate Professor of Speech, Language, and Hearing Sciences
- Carol L. Mackersie, Ph.D., Professor of Speech, Language, and Hearing Science
- Steven J. Kramer, Ph.D., Professor of Speech, Language, and Hearing Science
- Jacque J. Georgeson, Au.D., Audiology Clinic Director

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 audiologist in the expanding health care arena. The program encompasses academic, clinical, and research experiences in audiology and otolaryngology 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:

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

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

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

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

(3) TOEFL score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).
School of Speech, Language, and Hearing Sciences

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

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

(1) Complete the School of Speech, Language, and Hearing Sciences application online. Submit it online and also print it and include it with your supplemental materials;

(2) Applicant essay: See Guidelines for the Applicant Essay 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 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 an approved clinical site. These externships may require a competitive interview process by the agency. Externship sites may be in other parts of the country. All students in their fourth year externship must also enroll in the on-line clinical seminar at SDSU each semester.

Research Practicum Requirement. Each student will spend at least one semester participating in research being done by program faculty. Students will not be conducting independent research, but will actively participate in data collection and analysis at the discretion of the lab director. Students must enroll in the research practicum course for the appropriate campus.

Examinations. All students in the program will be evaluated at the following levels:

(1) First Year Evaluation: Students must have achieved a 3.0 cumulative grade point average for core courses during the first year and have appropriate clinical skills. The student’s ability to integrate the academic material and clinic procedures appropriate for the end of the first year will be assessed through a First Year Qualifying Examination. This examination will be a written and practical examination to be taken at the end of the summer semester. The First Year Qualifying Examination may be repeated once following additional directed study by the student’s adviser. Students must pass the First Year Evaluation in order to enroll in second year courses.

(2) Second Year Evaluation: Students must have achieved a cumulative grade point average of 3.0 for core and elective courses, and have appropriate clinical skills. The student’s ability to integrate the academic and clinic procedures appropriate for the end of the second year will be assessed through a Second Year Qualifying Examination. This examination will be a written and practical examination to be taken at the end of the spring quarter. The Second Year Qualifying Examination may be repeated once following additional directed study by the student’s adviser. Students must pass the Second Year Evaluation in order to enroll in third year courses.

(3) Comprehensive Examination. At the end of the third year, and after Advancement to Candidacy (see below), the student will take a written Comprehensive Examination.
Advancement to Candidacy. Candidates will be recommended for Advancement to Candidacy after successfully completing all course, laboratory rotation, and clinic requirements for Year 1 and Year 2 (with a minimum grade point average of 3.0), satisfactory performance on the first and second year evaluations, and approval of the doctoral project proposal. Students cannot enroll in the doctoral project course, take the comprehensive examination, or register for their externship until advanced to candidacy. The program’s Executive Committee recommends students eligible for advancement to candidacy to the graduate deans of both institutions.

Doctoral Project. Each student will complete an innovative doctoral project. The doctoral project can take the form of a number of different options, e.g., a research-based investigation, survey, meta-analysis, development of a clinical protocol based on published research findings, or other projects proposed by the student that are accepted by the committee. The project should be designed to allow an opportunity to demonstrate critical thinking on clinical issues. Each student will select a Doctoral Project Committee comprised of two Au.D. program faculty (one from each campus) and a third committee member approved by the Doctoral Project chair. The chair of the committee can be from either campus. The Executive Committee will approve each student’s Doctoral Project Committee. All doctoral projects will be written in a format approved by the student’s Doctoral Project Committee. The student’s final written document will be approved by the student’s Doctoral Project Committee. Each student will enroll in the appropriate doctoral project course depending on the campus in which their committee chair resides.

Award of the Degree. The Doctor of Audiology (Au.D.) degree will be awarded jointly by the Regents of the University of California and the Trustees of The California State University in the names of both cooperating institutions.

Financial Support
Funding for graduate students cannot be guaranteed, although every effort will be made to provide some financial support for as many students as possible, through graduate/teaching assistantships, research grants, clinical traineeships, and/or scholarships. Financial support will be awarded consistent with the policies of the two universities. Tuition and fees will be charged in accordance with the extant policies at the campus in which the student is matriculated in a given year.

Courses Acceptable on Au.D. Degree Program in the School of Speech, Language, and Hearing Sciences (AUD)

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

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 audiological assessment, including otoscopy, pure-tone, masking, speech, and immittance measures, testing and patient counseling. Hand’s 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 711. Hearing Amplification II (3)
Two lectures and two hours of activity.
Prerequisite: Audiology 710.
Advanced techniques in hearing aid analysis including in-situ and insertion real-ear measures for verification and validation, electro-acoustic analysis, ALD analysis, special techniques for pediatric hearing aid fitting, hearing aid fine tuning/troubleshooting and case studies.

AUD 712. Research and Evidence-Based Practice in Audiology (3)
Prerequisite: Admission to the doctoral program.
Research methods and scientific writing in audiology/hearing science; critical evaluation of research; evidence-based practice in audiology; research proposal development.

AUD 715. Diagnostic Audiology II (3)
Two lectures and two hours of activity.
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 audiological measures.

AUD 720. Auditory Evoked Potentials I (4)
Prerequisites: Audiology 700 and 705.
Theoretical and clinical aspects of auditory evoked potentials, specifically otoacoustic emissions and their measurement, electrocochleography, and auditory brainstem responses.

AUD 721. Clinical Case Studies and Staffings I (1)
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)
Prerequisite: Audiology 711.
Amplification, advances in hearing aid analysis, selection and verification techniques, advanced hearing aid signal processing strategies, programmable and digital technology, sensory aids for special applications.

AUD 815. Communication Disorders Across Lifespan and Cultures (2)
Communication processes and disorders from infancy to elderly, including phonetics, phonology, speech, and language. Prepares audiologists to recognize a variety of communication disorders, and to learn how to apply screening instruments, in culturally sensitive ways, and to make appropriate referrals.

AUD 820. Aural Rehabilitation and Counseling (3)
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.
Bioinformatics and Medical Informatics

In the College of Sciences

Associated Faculty
Sanford I. Bernstein, Ph.D., Professor of Biology
Will Fields, D.N.Sc., Professor of Nursing
Robert A. Gottlieb, M.D., Professor of Biology
Richard A. Levine, Ph.D., Professor of Statistics
Kathleen L. McGuire, Ph.D., Professor of Biology
Usha Sinha, Ph.D., Professor of Physics
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
Andrew J. Bohonak, Ph.D., Associate Professor of Biology
Scott Kelley, Ph.D., Associate Professor of Biochemistry
Sunil Kumar, Ph.D., Associate Professor of Electrical and Computer Engineering
Chi-Dean Lin, Ph.D., Associate Professor of Statistics
John J. Love, Ph.D., Associate Professor of Chemistry and Biochemistry

Shelli R. McAlpine, Ph.D., Associate Professor of Chemistry and Biochemistry
Faramarz Valafar, Ph.D., Associate Professor of Computer Science
Elizabeth R. Waters, Ph.D., Associate Professor of Biology
Robert W. Zeller, Ph.D., Associate Professor of Biochemistry
Robert A. Edwards, Ph.D., Assistant Professor of Computer Science

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

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

Master of Science Degree in Bioinformatics and Medical Informatics

The following materials should be mailed or delivered to:

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

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

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part 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)
   - BIOL 568 Bioinformatics (3)
   - CHEM 560 General Biochemistry (3)
   - CS 600 Methods in Bioinformatics, Medical Informatics, and Cheminformatics (3)

2. Complimentary: Nine units in a field complimentary to the student's background with approval of the graduate coordinator selected from the following courses.
   - CHEM 567 Biochemistry Laboratory (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

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)
   - BIOL 568 Bioinformatics (3)
   - CHEM 560 General Biochemistry (3)
   - CS 600 Methods in Bioinformatics, Medical Informatics, and Cheminformatics (3)

2. Complimentary: Twelve units in a field complimentary to the student's background with approval of the graduate coordinator selected from the following courses.
   - CHEM 567 Biochemistry Laboratory (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

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
   - 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.

GRADUATE COURSES

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
Prerequisite: 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.
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
J. David Archibald, Ph.D., Professor of Biology
Sanford J. Bernstein, Ph.D., Professor of Biology
Annalisa Berta, Ph.D., Professor of Biology
(Graduate Adviser, Evolutionary Biology Ph.D. Program)
Richard L. Bizzozzo, 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 G. Gembotski, Ph.D., Professor of Biology
(Graduate Coordinator, Biology)
Robert A. Gottlieb, M.D., Professor of Biology
Greg L. Harris, Ph.D., Professor of Biology Ph.D. program
(Graduate Adviser, Biology)
Stanley R. Maloy, Ph.D., Professor of Biology and
Dean of the College of Sciences
Leroy R. McClennaghan, 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
Todd 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)
Todd W. Anderson, Ph.D., Associate Professor of Biology
(Graduate Adviser, Ecology)
Matthew S. Edwards, Ph.D., Associate Professor of Biology
Marshal C. Hedin, Ph.D., Associate Professor of Biology
Brian T. Hentschel, Ph.D., Associate Professor of Biology
Kevin A. Hovel, Ph.D., Associate Professor of Biology
Scott 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 Lewis, 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) TOEFL score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).

Master of Arts Degree in Biology
Master of Science Degree in Biology
Master of Science Degree in Microbiology
The following materials should be mailed or delivered to:
Department of Biology
Graduate Coordinator
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4614
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.
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: 04210) (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. 771458; M.S. 771459): 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. 771460): This 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. 771456; M.S. 771468): 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/cmobi/proposinfo.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:

- DNA recombination and chromosome structure: A. Segall.
- 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. Bizzocco.

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, Glembocki, 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

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:

**Biology**

**Ecosystem ecology and global change:** Effects of global change (elevated CO₂ 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, chaparral, deserts, 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, Lal, 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, programatically 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 two from UCR (see below) must 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:

<table>
<thead>
<tr>
<th>Year One at SDSU</th>
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<tbody>
<tr>
<td>Each semester:</td>
</tr>
<tr>
<td>BIOL 795</td>
</tr>
<tr>
<td>At least one of the following courses:</td>
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<tr>
<td>BIOL 624</td>
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<tr>
<td>BIOL 740</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Year Two at UCR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Each quarter of residence:</td>
</tr>
<tr>
<td>UCR BIOL 216</td>
</tr>
<tr>
<td>UCR BIOL 252</td>
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<tr>
<td>UCR BIOL 265</td>
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<tr>
<td>At least one of the following courses:</td>
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<tr>
<td>UCR BIOL 211</td>
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<tr>
<td>UCR BIOL 212</td>
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<td>UCR BIOL 213</td>
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<td>UCR BIOL 219</td>
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<tr>
<td>UCR BIOL 220</td>
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</table>

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 JDPEB 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 511. Evolution of Development (3)
Prerequisites: Biology 352 and 366.
Dynamic relationship between regulatory functions that control development and the evolutionary process, and vice versa, illustrated with evidence derived from developmental, phylogenetic, paleontological, computational, and ecological research. Emphasis on genomic regulatory networks of transcriptional regulatory elements and cell-signaling pathways.

BIOL 512. Evolution and Ecology of Marine Mammals (3)
Two lectures and three hours of laboratory.
Prerequisites: Biology 352 and 354.
Biology of marine mammals including pinniped, cetacean and sirenian evolution, diet and foraging strategies, social organization, reproductive strategies, echolocation, diving physiology, and conservation.

BIOL 514. Biology of the Algae (4)
Three lectures and three hours of laboratory.
Prerequisites: Biology 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.

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 203.
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 252.
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.
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 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 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 isotope, 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, endemicity 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 551. Recombinant DNA (3)
Prerequisites: Biology 350, 366; 366L, Chemistry 365, and credit or concurrent registration in Biology 549 or 567.
Theory and practice of recombinant DNA techniques.

BIOL 554. Molecular Virology (3)
Prerequisites: Biology 366 and Chemistry 365.
Molecular aspects of structure, genetics, and replication of viruses, virus-host interactions, pathogenesis of virus infections, diagnostic virology, and antiviral vaccines and drugs; emphasis on human pathogens.

BIOL 555. Principles of Electron Microscopy (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.
Prerequisite: Credit or concurrent registration in Biology 555.
Biological specimen preparation and operation of scanning electron microscope.

BIOL 557. Transmission Electron Microscopy Laboratory (3)
One lecture and six hours of laboratory.
Prerequisite: Credit or concurrent registration in Biology 555.
Biological sample preparation and operation of transmission electron microscope.

BIOL 560. Animal Physiology (3)
Prerequisites: Biology 203, 203L, 204, 204L; Chemistry 365; Physics 180B, 182A, and 182B.
Principles 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)
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.

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 367.
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.
Biology

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 604. Seminar in Aquatic Ecology (2)
Prerequisite: Biology 354.
Ecological concepts as applied to the fresh water and marine environment. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units applicable to a master's degree.

BIOL 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 765. 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
Prerequisites: An officially constituted dissertation committee and advancement to candidacy.
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.
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. Bizzocco, Ph.D., Professor of Biology
Terrence G. Frey, Ph.D., Professor of Biology
Christopher C. Giembotki, Ph.D., Professor of Biology
Robert A. Gottlieb, M.D., Professor of Biology
Stanley R. Maloy, Ph.D., Professor of Biology and
Dean of the College of Sciences
Kathleen L. McGuire, Ph.D., Professor of Biology
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 Kelley, Ph.D., Associate Professor of Biology
John J. Love, Ph.D., Associate Professor of Chemistry and
Biochemistry
Shelli R. McAlpine, 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. Crooke, 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 Ziokarnik, 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 require-
ments before being recommended for admission.

1. Possess a bachelor’s degree with a major in a biological or physi-
    cal 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.
4. Supply two letters of reference that describe the applicant's poten-
tial 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 prerequi-
tive 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 511. Evolution of Development (3)
BIOL 549. Microbial Genetics and Physiology (3)
BIOL 551. Recombinant DNA (3)
BIOL 554. Molecular Virology (3)
BIOL 555. Principles of Electron Microscopy (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

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  
**http://www.cbbd.sdsu.edu/**

**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. E. Dale Sevier, Director of the Center for Bio/Pharmaceutical and Biodevice Development. 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](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](http://www.ets.org), SDSU institution code 4682);

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

**Center for Bio/Pharmaceutical and Biodevice Development**

The following materials should be mailed or delivered to:

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

1. Three letters of recommendation sent from persons who are knowledgeable about the candidate’s potential for success in graduate study.

2. Applicant Essay that describes the applicant’s purpose in pursuing graduate studies in quality assurance and quality control and relationship to personal and career objectives.

3. List of any employment or volunteer experience relevant to the degree program.

4. Candidates for admission will typically come from one of the disciplines offered in the life and physical sciences and engineering.
Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part 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)
   - IDS 705 Communication Strategies (3)

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

   Elective Courses
   - BQS 620 Quality Control Methods Development (3)
   - BQS 696 Advanced Topics in Biomedical Quality Systems (1-4)
   - BQS 740 Statistical Process Control (3)
   - BQS 741 Statistical Experiment Design (3)
   - BQS 746 Quality Control Laboratory Validation (3)
   - BQS 797 Research (1-3) Cr/NC/RP
   - BQS 798 Special Study (1-3) Cr/NC/RP
   - 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 772 Post-Approval Activities, Including FDA Advertising, Promotion, and Labeling (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 E. Dale Sevier, Ph.D., Director of the Center for Bio/Pharmaceutical and Biodevice Development. 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 620. Quality Control Methods Development (3)
Prerequisite: Biomedical Quality Systems 601.
Strategies and approaches for development of quality control methods for characterizing drugs and biologics. Development of high pressure liquid chromatography (HPLC) methods.

BQS 621. Quality Audits: Internal, Vendors, and Contract Services (3)
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 746. Quality Control Laboratory Validation (3)
Prerequisite: Biomedical Quality Systems 601.
Roles and responsibilities of a typical validation department function in the biopharmaceutical, medical device, and pharmaceutical industries. Equip the middle and upper level biomedical professionals with "real world" skills, approaches, and solutions to multifaceted validation issues.

BQS 797. Research (1-3) Cr/NC/RP
Prerequisite: Advancement to candidacy.
Research in the area of quality systems. Maximum credit six units applicable to a master’s degree.

BQS 798. Special Study (1-3) Cr/NC/RP
Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units applicable to a master’s degree.

BQS 799A. Thesis or Project (3) Cr/NC/RP
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.
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
Kung-Jong Lui, Ph.D., Professor of Statistics
Donald J. Slymen, Ph.D., Professor of Public Health
John E. Alcaraz, Ph.D., Associate Professor of Public Health
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)
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
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 Science in Latin American Studies. The College of Business Administration M.B.A. and M.S. programs are accredited by AACSB International—The Association to Advance Collegiate Schools of Business.

The major goal of the Master of Business Administration degree is to prepare students with diverse academic backgrounds for entry into general management positions in business and not-for-profit enterprises. The primary purpose of the Master of Science degree in Business Administration is to provide a foundation for technical and executive careers in the management of specific functional and professional areas.

The objective of the Master of Science degree in Accountancy is to prepare students for careers as professional accountants in financial institutions, government, industry, nonprofit organizations, and public practice. The basic conceptual knowledge of accounting and business can be obtained through an undergraduate degree or by otherwise meeting the prerequisites for the M.S. degree in Accountancy. The program offers the opportunity for greater depth of education by allowing students to concentrate their education in courses of specialized study in accounting.

Close contacts with large and small firms, both local and national, enhance the business student's education. The generous cooperation of local business and government organizations provides opportunities for research and field study for graduate students. The continued professionalization of the business executives' responsibilities has created many opportunities for the student with an advanced degree in business administration.

All students considering graduate work in business are advised to seek further details from the Graduate Programs Office in the College of Business Administration, 619-594-8073, prior to applying for admission.

Admission to Graduate Study
Admission to the college's graduate programs is competitive. A number of factors are taken into consideration in the admission decision, and only the top applicants are accepted. These factors include the applicant's previous academic performance, the quality of the previous universities attended, the field of undergraduate study, scores on the Graduate Management Admissions Test (GMAT), management experience and the written application essay. References which validate experience may also be considered. A 570 TOEFL score is normally required when English is not the student's principal language.

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

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

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

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

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

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

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

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

Master of Business Administration Degree

Master of Business Administration Degree and Juris Doctor Degree

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

The following materials should be mailed or delivered to:

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

(1) Personal statement;

(2) Resume;

(3) Letters of reference (optional; maximum of three).

Master of Business Administration Degree for Executives

The following materials should be mailed or delivered to:

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

(1) Two sets of official transcripts (in sealed envelopes);

(2) Two letters of recommendation (forms are available on the Web site);

(3) A one-page statement of career objectives;

(4) Resume.

Complete directions are included in the MBA for Executives program application packet. Call 619-594-6010 or http://www.sdsu.edu/emba.
Master of Business Administration Degree

Admission to the Degree Curriculum

Regulations governing admission to the university and to the College of Business Administration are outlined above and in Part Two of this bulletin.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part 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)

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

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

   Management of Technology Issues in Business Theme
   - IDS 688 Information Systems in Organizations (3)
   - IDS 691 Decision Support Systems (3)

3. Complete 18 units of electives 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.

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

Accountancy
- Major Code: 05021
- SIMS Code: 221908

Athletics & Fitness Management
- Major Code: 05011
- SIMS Code: 221714

Entrepreneurship
- Major Code: 05997
- SIMS Code: 222361

Finance
- Major Code: 05041
- SIMS Code: 222117

Health Services Administration
- Major Code: 05011
- SIMS Code: 221710

Information Systems
- Major Code: 07021
- SIMS Code: 222338

International Business
- Major Code: 05131
- SIMS Code: 223651

Management
- Major Code: 05061
- SIMS Code: 222561

Marketing
- Major Code: 05091
- SIMS Code: 222773

Project Management
- Major Code: 05011
- SIMS Code: 221719

Real Estate
- Major Code: 05111
- SIMS Code: 221914

Supply Chain Management
- Major Code: 05064
- SIMS Code: 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 can choose from two concentrations: general and life sciences. Students accepted for the M.B.A. for Executives concentration are fully matriculated in the university and meet all university requirements as established by the Graduate Council.

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

Corporation

SDSU GRADUATE BULLETIN 2010-2011
The MBA for Executives in life sciences concentration is a 20-month program focusing on bringing life science products from concepts to market. A blended instructional model is used in which students complete courses offered in both an online format and in intensive face-to-face sessions during residency periods. The curriculum incorporates courses from the College of Business Administration and the College of Sciences. The fee structure is also unique to the program and unrelated to the usual San Diego State University fee schedule. Students should contact the program office for a program calendar, class schedule, and fee summary.

In addition to meeting the requirements for classified graduate standing, and the basic requirements for the master’s degree as described in Part 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)

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<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>B A 601</td>
<td>Management of Organizations and Human Resources</td>
<td>3</td>
</tr>
<tr>
<td>B A 602</td>
<td>Statistics for Business Decisions</td>
<td>3</td>
</tr>
<tr>
<td>B A 603</td>
<td>Executive Financial Accounting</td>
<td>2</td>
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<tr>
<td>B A 604</td>
<td>Executive Managerial Accounting</td>
<td>2</td>
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<tr>
<td>B A 605</td>
<td>Managerial Marketing</td>
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<tr>
<td>B A 615</td>
<td>Strategic Financial Management</td>
<td>3</td>
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<tr>
<td>B A 616</td>
<td>Competitive Analysis</td>
<td>3</td>
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<tr>
<td>B A 700</td>
<td>Business in a Global Environment</td>
<td>3</td>
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<td>B A 701</td>
<td>Executive Entrepreneurship</td>
<td>3</td>
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<tr>
<td>B A 702</td>
<td>Social Responsibility: Legal and Ethical Environment of Business</td>
<td>3</td>
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<tr>
<td>B A 703</td>
<td>Strategic Management</td>
<td>3</td>
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<tr>
<td>B A 705</td>
<td>Marketing Strategy</td>
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<td>B A 707</td>
<td>Executive Seminar in Negotiations</td>
<td>2</td>
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<tr>
<td>B A 709</td>
<td>Seminar in the Global Financial Environment</td>
<td>3</td>
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<tr>
<td>B A 710</td>
<td>Executive Leadership</td>
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<tr>
<td>B A 711</td>
<td>Seminar in Contemporary Challenges</td>
<td>5</td>
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<tr>
<td>B A 790</td>
<td>Directed Readings in Business Administration</td>
<td>(3 Cr/NC)</td>
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### MBA for Executives in Life Sciences
(Major Code: 05016) (SIMS Code: 221707)

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ACCTG 696</td>
<td>Accounting for Executives in Life Sciences</td>
<td>3</td>
</tr>
<tr>
<td>B A 601</td>
<td>Management of Organizations and Human Resources</td>
<td>3</td>
</tr>
<tr>
<td>B A 615</td>
<td>Strategic Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>B A 655</td>
<td>Marketing</td>
<td>3</td>
</tr>
<tr>
<td>B A 710</td>
<td>Executive Leadership</td>
<td>3</td>
</tr>
<tr>
<td>B A 711</td>
<td>Seminar: Value Chain in Health Care</td>
<td>3</td>
</tr>
<tr>
<td>B A 790</td>
<td>Directed Readings in Business Administration</td>
<td>(3 Cr/NC)</td>
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<tr>
<td>IDS 705</td>
<td>Communications Strategies</td>
<td>3</td>
</tr>
<tr>
<td>MGT 745</td>
<td>Seminar in Corporate Entrepreneurship</td>
<td>3</td>
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<tr>
<td>MKTG 761</td>
<td>Product Innovation Management</td>
<td>3</td>
</tr>
<tr>
<td>RA 601</td>
<td>Pharmaceutical, Biotechnology, and Medical Device Industries</td>
<td>3</td>
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<tr>
<td>RA 602</td>
<td>Food and Drug Law</td>
<td>3</td>
</tr>
<tr>
<td>RA 705</td>
<td>Project Planning for the Biomedical Industries</td>
<td>3</td>
</tr>
<tr>
<td>RA 770</td>
<td>Current Good Manufacturing Practices - General Concepts</td>
<td>3</td>
</tr>
<tr>
<td>RA 775</td>
<td>Clinical Trials: Issues in Design, Conduct, and Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>RA 781</td>
<td>Ethics for Healthcare Professionals</td>
<td>3</td>
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</tbody>
</table>

### Master of Science Degree in Business Administration
(Major Code: 0501) (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)

#### Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Four of this bulletin. Each of the concentrations in the Master of Science in Business Administration requires Plan A, Thesis; or Plan B, Directed Readings in Administration 780 (Field Studies in Business), may be accepted for coursework 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.

#### 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). To complete this degree, students 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)
- RA 601 Pharmaceutical, Biotechnology, and Medical Device Industries (3)
- RA 602 Food and Drug Law (3)
- RA 705 Project Planning for the Biomedical Industries (3)
- RA 707 Current Good Manufacturing Practices - General Concepts (3)
- RA 775 Clinical Trials: Issues in Design, Conduct, and Evaluation (3)
- RA 781 Ethics for Healthcare Professionals (3)
Business Administration

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 657.

Additionally, this concentration requires the following prerequisites, rather than the list shown under “Admission to the Degree Curriculum:”

ACCTG 201  Financial Accounting Fundamentals (3)
ECON 101  Principles of Economics (3)
ECON 102  Principles of Economics (3)
ECON 201  Statistical Methods (3) OR
STAT 119  Elementary Statistics for Business (3)
ECON 320  Intermediate Macroeconomic Theory (3) OR
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 of 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)
   IDS 688  Information Systems in Organizations (3)
   IDS 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

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

3. B A 780 Field Studies in Business (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 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 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.

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)

**Management of Technology Issues in Business Theme**
- IDS 688 Information Systems in Organizations (3)
- IDS 691 Decision Support Systems (3)

4. Complete 15 units in Business Administration to include:
- FIN 654 Seminar in International Business Finance (3)
- MGT 710 Seminar in World Business Environment (3)
- MGT 723 Seminar in International Strategic Management (3)
- MGT 731 Seminar in Strategic Management of Technology and Innovation (3)
- MKTG 769 Seminar in International Marketing (3)

5. Complete 24 units in courses of Latin American content, including the following required courses:
- LATAM 600 Seminar in Latin American Studies (3)
- LATAM 601 Seminar on Methodology of Latin American Studies (3)

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

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

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

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

**History**
- HIST 550 Colonial Mexico (3)
- HIST 551 Modern Mexico (3)
- HIST 552 Brazil (3)
- HIST 558 Latin America in World Affairs (3)
- HIST 640 Directed Readings in Latin American History (3)

**Political Science**
- POL S 564 Environmental Politics in Global Perspective (3)
- POL S 566 Political Change in Latin America (3)
- POL S 567 Political Systems of Latin America (3)
- POL S 568 Mexican Politics (3)
- POL S 651 Seminar in Migration and Border Politics (3)
- POL S 667 Seminar in Latin American Political Systems (3)

**Sociology**
- SOC 554 United States-Mexico Transborder Populations and Social Change (3)
- SOC 740 Seminar in Social Psychology: Sociological Approaches: 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.

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.

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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 700. Field Studies in Business (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. Management of Organizations and Human Resources (3)
Role of the manager in designing organizations for effectiveness with emphasis on organization theory, organization behavior, and human resources management.

B A 602. Statistics for Business Decisions (3)
Statistics and production operations management. Data analysis, central tendency and variability, probability, distributions, sample inference, association analysis. Applications in engineering, manufacturing and service, and an overview of decision theory, queueing, total quality control, and project management.

B A 603. Executive Financial Accounting (2)
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)
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)
The marketing function in an organization. Managerial activities of marketing including market analysis, target market selection and design of the organization’s marketing program.

B A 608. Managerial Communication (2)
Prerequisite: Admission to M.B.A. program.
Advanced communication concepts including the collection, analysis, and presentation of data. Written and oral communication strategies. (Formerly numbered Business Administration 609.)

B A 615. Strategic Financial Management (3)
Provides a framework for financial decision making. Covers relevant modern theory and emphasizes role of finance in corporate strategy. Topics include financial analysis and planning, investment, capital structure and dividend decisions and valuation and corporate restructuring. Not open to students with credit in Business Administration 665.

B A 616. Competitive Analysis (3)
Competition in typical unregulated product or service markets. Competitive forces in such markets, and impact of these forces on economic profits, rates of return, and relative market-shares of competing firms. Not open to students with credit in Business Administration 653.

B A 700. Business in the Global Environment (3)
Evolution of multinational corporations, management of organizations in global environment, and marketing and management implications of competition in the international arena.

B A 701. Executive Entrepreneurship (3)
Business Administration

B A 702. Social Responsibility: Legal and Ethical Environment of Business (3)
Role of the manager in dealing in a socially responsible and ethical manner with internal and external constituencies.

B A 703. Strategic Management (3)
Corporate and business level strategic decision making. Topics include industry and environmental analysis, strategy implementation, strategic planning systems. Case descriptions of actual company situations serve as basis for analysis and recommendations.

B A 705. Marketing Strategy (2)
Development, implementation, and evaluation of marketing strategy and plans. Role of marketing planning, analysis and control; contributions and implications of marketing to corporate strategy. Strategies for attaining competitive advantage. Contemporary marketing planning tools and techniques.

B A 707. Executive Seminar in Negotiations (2)
Prerequisite: Admission to M.B.A. for Executives program.

B A 709. Seminar in the Global Financial Environment (3)
Develops understanding of world economy and illustrates impact of financial environment on decision making process of business managers. How corporations respond to changing economic forces and/or historical governmental policies.

B A 710. Executive Leadership (3)
Theoretical and empirical literature pertaining to study and assessment of leadership skills. Process of organizational change and development.

B A 711. Seminar in Contemporary Challenges (1-5)
Challenges facing managers of organizations in modern society: organizational, human resources, operational, economic, environmental, political, international, and technological issues. See Class Schedule for specific content. Maximum credit five units applicable to a master’s degree.

B A 790. Directed Readings in Business Administration (3) Cr/NC
Preparation for the comprehensive examination for students in the M.B.A. for Executives program (Plan B).
Accountancy
In the College of Business Administration

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TELEPHONE: 619-594-5070
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E-MAIL: accounting@mail.sdsu.edu

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Martha S. Doran, Ph.D., Associate Professor of Accountancy
(Graduate Adviser)
Gun-Ho Joh, Ph.D., Associate Professor of Accountancy
(Graduate Adviser)
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Shana Clor-Proell, Ph.D., Assistant Professor of Accountancy
David DeBoskey, Ph.D., Assistant Professor of Accountancy
Damon M. Fleming, Ph.D., Assistant Professor of Accountancy
(Graduate Adviser)
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
(Graduate Adviser)

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 663 Managerial Economics (3)
  (or ECON 101 and ECON 102)

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.
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 141 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 must 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 after completion of 120 units. 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

(Also Acceptable for Advanced Degrees)

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 prerequisite 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.

Fraud examination to include techniques and technologies for interviewing, document examination, public records research, and financial statement analysis. Skills and tools for auditors, consultants, tax professionals, managers.

ACCTG 508. Accounting for Not-For-Profit Organizations (3)

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: Information and Decision 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 Reporting and Analysis II (3)

Prerequisite: Business Administration 650.

User approach to interpreting financial accounting information at an intermediate level. Pensions, cash flow, property, intangibles, notes, bonds, leases, investments, derivatives, equity, dilutive securities, compensation, earnings per share, and accounting changes.

ACCTG 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 and Financial Reporting and Analysis (3)

Prerequisites: Business Administration 650 and 660.

Managerial analysis and financial reporting topics from user and preparer perspectives, including current assets and liabilities, pricing, cost management, inventory, traditional and contemporary costing systems, relevant costs, cost allocation, contingencies, deferred taxes, revenue, profit analysis, performance strategy and compensation.
ACCTG 626. 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 Planning (3)
Prerequisite: Accountancy 322, 503, or 624.
Tax research with emphasis on solving tax planning problems. Introduction to statutory, administrative, and judicial sources of tax law.

ACCTG 651. Seminar in Corporate Tax (3)
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.
Introduction to statutory, administrative, and judicial sources of tax law.

ACCTG 661. Seminar in International Accounting (3)
Prerequisite: Business Administration 650.
Theories, practices, and concepts which underlie development of standards of financial reporting for enterprises engaged in international trade and business.

ACCTG 663. Financial Statement Analysis (3)
Prerequisite: Business Administration 650.
Illustrative cases and problems to analyze methods for communicating information about financing and operating activities of corporate firms, and techniques for evaluating the information.

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 Information and Decision 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)
Prerequisites: Business Administration 650 and 660.
Social and behavioral science theories influencing design and operation of management control systems with emphasis on environmental and regulatory factors that influence, affect, motivate, and control managers and employees.

ACCTG 696. Seminar in Selected Topics (3)
Intensive study in specific areas of accounting. 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 accounting. 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.
Finance
In the College of Business Administration

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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)
William E. Sterk, 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
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
Jaemin Kim, Ph.D., Assistant Professor of Finance
Marie-Eve Lachance, Ph.D., Assistant Professor of Finance

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.
Prerequisites: 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.
Prerequisites: Employee benefit and pension planning, including regulation and tax issues.

FIN 589. Personal Financial Planning (3)
Prerequisite: Finance 323.
Financial planning process including data gathering, cash flow and debt considerations, goal programming (including retirement and education funding), integration, plan formulation, and implementation. Practice management considerations including establishment of ethical and legal, client and professional relationships.

FIN 590. Personal Financial Planning Practicum (1)
Prerequisite: Credit or concurrent registration in Finance 589 or 657.
Preparation of individual or family financial plans using comprehensive cases and/or real family financial data.

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.

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.

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.

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FIN 657. Financial Counseling (3)
Prerequisite: Business Administration 665. Decision-making process and theory of individual financial needs. Planning and implementation of financial strategies that aid in meeting family goals. Counseling, Ethics. Preparation of financial plans using cases.

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.
Information and Decision Systems

In the College of Business Administration

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Faculty
Bruce A. Reinig, Ph.D., Professor of Information and Decision Systems, Chair of Department
James R. Beatty, Ph.D., Professor of Information and Decision Systems
Alexis Koster, Ph.D., Professor of Information and Decision Systems (Graduate Adviser)
James R. Lackritz, Ph.D., Professor of Information and Decision Systems and Associate Dean for Academic Affairs of the College of Business Administration
John M. Penrose, Ph.D., Professor of Information and Decision Systems
Feraidoon Raafat, Ph.D., Professor of Information and Decision Systems
Yeongling Helio Yang, Ph.D., Professor of Information and Decision Systems
Korea Shin, Ph.D., Professor of Information and Decision Systems (Graduate Adviser)
John M. Penrose, Ph.D., Professor of Information and Decision Systems
Robert Plice, Ph.D., Associate Professor of Information and Decision Systems
Annette C. Easton, Ph.D., Associate Professor of Information and Decision Systems
Theophilus Addo, Ph.D., Associate Professor of Information and Decision Systems
Robert Plice, Ph.D., Associate Professor of Information and Decision Systems
James R. Beatty, Ph.D., Chair of Department
Robert Plice, Ph.D., Associate Professor of Information and Decision Systems

Courses Acceptable on Master's Degree Programs in Business Administration (IDS)

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
IDS 515. Intermediate Programming for Business Applications (3)
Prerequisite: Information and Decision Systems 315 or knowledge of one computer programming language. Intermediate programming for business applications with Java, C#, or similar languages. Data structures, control structures, and program structures. Use of object-oriented features, classes, subclasses, and inheritance for modeling and processing of business information.

IDS 520. Advanced Programming for Business Applications (3)
Prerequisite: Information and Decision Systems 515. Advanced object-oriented features using Java (abstract classes, polymorphism, interfaces, generic classes) for business application programs using graphical user interfaces. Use of multitreading for business simulation. Enhancement of business applications with multimedia and database connectivity.

GRADUATE COURSES
IDS 609. Information Technology for Business (3)
Information technology to include major horizontal technologies: hardware, software, data, telecommunications, and Internet. Focus on emerging information technologies that will provide value to organizations. Technical aspects of information technologies and their impacts on organizations.

IDS 610. Electronic Business Technologies (3)
Prerequisite: Classified graduate standing. Basic concepts of e-business technologies. Development tools, languages, processes, and methodologies for electronic business applications.

IDS 620. Electronic Business Infrastructures (3)
Prerequisite: Information and Decision Systems 610. Advanced information technology concepts associated with e-business and e-commerce infrastructure and systems architecture.

IDS 630. IT Management Strategies for E-Business (3)
Prerequisite: Information and Decision Systems 620. Analysis and application of strategic information technology management initiatives, designs, and architectures for attaining an organization’s e-business goals.

IDS 680. Information Systems Hardware and Software (3)
Prerequisite: Classified graduate standing. Computer architecture, programming languages, programming systems, and operating systems.

IDS 686. Database Management Systems (3)
Prerequisite: Classified graduate standing. Applications of database management systems in business. Design and administration of database processing systems applications.

IDS 687. Data Communications and Distributed Data Processing (3)
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.

IDS 688. Information Systems in Organizations (3)
Prerequisite: Classified graduate standing. Evolutionary role of information systems: from support function to strategic entity, planning, organizing, and administering the information systems function. Information and its relationships to business decision making. Global and ethical aspects of information technology.

IDS 691. Decision Support Systems (3)
Prerequisite: Completion of MBA core or MS prerequisites. Design, implementation, and integration of computerized decision support systems into business management. Problem representation, modeling, and simulation.

IDS 695. Information Systems Development I (3)
Prerequisite: 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, and management of information systems design.

IDS 696. Seminar in Selected Topics (3)
Intensive study in specific areas of information systems. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

IDS 697. Information Systems Development II (3)
Prerequisite: Information and Decision Systems 695. Business information systems design, installation, and implementation as part of the systems development life cycle. Structured design, prototyping, controls, the make vs. buy decision, selection of hardware and software.

IDS 705. Communication Strategies (3)
Prerequisite: Classified graduate standing. Development of advanced written, oral, and interpersonal communication strategies for the business environment.
IDS 744. Seminar in Lean Six Sigma Quality Management (3)
Prerequisite: Business Administration 662.
Applications of lean principles and Six Sigma methodology for
business quality and agility. Advanced concepts, methods, lean tools,
and statistical quality tools for process improvement.

IDS 748. Seminar in Advanced Data Analysis (3)
Prerequisite: Business Administration 652.
Applications of various statistical techniques and design of experi-
ments for business. Advanced ANOVA and Taguchi designs, multiple
regression modeling methodologies, and multivariate techniques,
such as factor analysis, judgement analysis, multiple discriminant
analysis, multivariate analysis of variance, and canonical correlation.

IDS 749. Seminar in Applied Behavioral Measurement (3)
Prerequisite: Business Administration 652.
Measurement procedures useful in analyzing such areas as
teamwork, leadership, job satisfaction, attitudes, motivation, total
quality management, and customer satisfaction. Development and
use of technologies including Likert, Thurstone, Guttman, paired-
comparison, forced-choice, semantic-differential, C-E diagrams, and
review of existing instruments used in business-related settings.

IDS 750. Project Management (3)
Prerequisite: Business Administration 662.
Managing projects. Includes network modeling, defining activities
and events, cost estimating and reporting, single and multiple
resource allocation and leveling. Computerized project management
software will be used.

IDS 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.

IDS 753. Global Supply Chain Management (3)
Prerequisite: Classified graduate standing.
Advanced concepts, method, and implementation of global supply
chain strategies and management; global sourcing and supplier
development; global logistic network and management; information
technology and e-business for supply chain; supply chain design and
optimization; performance metrics and measurements.

IDS 754. Seminar in Operations Strategy (3)
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 infor-
mation technology implementation.

IDS 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.

IDS 790. Directed Readings in Information and Decision
Systems (3) Cr/NC
Prerequisite: Advancement to candidacy.
Preparation for the comprehensive examination for students.

IDS 797. Research (3) Cr/NC/RP
Prerequisite: Advancement to candidacy.
Research in the area of information and decision systems.
Maximum credit six units applicable to a master’s degree.

IDS 798. Special Study (1-3) Cr/NC/RP
Prerequisite: Consent of staff; to be arranged with department
chair and instructor.
Individual study. Maximum credit six units applicable to a master’s
degree.
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 applicable to a master's degree with approval of the graduate adviser.

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)
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 701. Seminar in World Business Environment (3)
Prerequisite: Business Administration 651.

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.
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
William E. Baker, Ph.D., Professor of Marketing
Michael A. Kartalija, Ph.D., Professor of Marketing
Kathleen A. Krentler, D.B.A., Professor of Marketing
Massoud M. Saghafi, Ph.D., Professor of Marketing
(Chair of Department)
Ronald W. Stampfl, Ph.D., Professor of Marketing
(Chair of Department)
Pradeep K. Tyagi, Ph.D., Professor of Marketing
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 696 and 698 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.

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.
The Department of Chemistry and Biochemistry at SDSU provides a substantial inventory of modern chemical instrumentation in support of teaching and research. Included are systems for the performance of nearly all major types of chemical separations; several GC- and two HPLC-mass spectrometric systems; 200, 400, 500, and 600 MHz nuclear magnetic resonance (NMR) spectrometers; two FT infrared spectrometers; ultraviolet-visible spectrometric instruments for both atomic and molecular emission and absorption studies; electrochemical instrumentation for potentiometric, voltammetric and coulometric measurements; radiochemical instrumentation; laser systems for spectroscopy, and x-ray diffractometers for both small and macromolecules. Several groups have inert-atmosphere gloveboxes for conducting research on air- and moisture-sensitive compounds. The departmental computer lab has 25 personal computers (Mac and PC) for general use, and numerous research-grade computers are housed in individual laboratories. Access is also available to accounts at the San Diego Supercomputer Center. In-house support staff includes NMR, analytical instrument, and electronics technicians as well as a full-time shop technician for machining, plastic working, welding, and other fabrications needs.

Admission to Graduate Study

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

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

Graduate Admissions

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

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

(1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;
Note:
- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

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

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

Department of Chemistry and Biochemistry

The following materials should be mailed or delivered to:

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

(1) Three letters of reference from people who can comment on your academic and research abilities;

(2) Personal statement, including your goals and motivation for graduate study;

(3) Departmental Graduate Program Application form. Refer to http://www.chemistry.sdsu.edu/graduate/forms/ to download application form.
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.

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.

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 561.

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.

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.
In the College of Arts and Letters

OFFICE: Arts and Letters 348
TELEPHONE: 619-594-6452 / FAX: 619-594-3195

Faculty
Adelaïda R. Del Castillo, Ph.D., Associate Professor of Chicana and Chicano Studies, Chair of Department
Richard Griswold del Castillo, Ph.D., Professor of Chicana and Chicano Studies, Emeritus
D. Emily Hicks, Ph.D., Professor of English and Comparative Literature and Chicana and Chicano Studies
Isidro D. Ortiz, Ph.D., Professor of Chicana and Chicano Studies
Maria de la Luz Ibarra, Ph.D., Associate Professor of Chicana and Chicano Studies
Norma V. Iglesias Prieto, Ph.D., Associate Professor of Chicana and Chicano Studies (Graduate Adviser)
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) TOEFL score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).

Department of Chicana and Chicano Studies
The following materials should be mailed or delivered to:

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

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

(2) Statement of purpose;

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

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy as described in Part 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 Borderlands 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.

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.

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 788. 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 798A. 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.
**Child and Family Development**

In the College of Education

**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. Maier, Ph.D., Professor of Psychology
Gerald Monk, Ph.D., Professor of Counseling and School Psychology
Alberto M. Ochoa, Ed.D., Professor of Policy Studies in Language and Cross-Cultural Education
Joseph M. Price, Ph.D., Professor of Psychology
Judy S. Reilly, Ph.D., Professor of Psychology
Brian H. Spitzberg, Ph.D., Professor of Communication
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 assistantships, 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 assistantships and graduate assistantships in child development may be available to a limited number of qualified students.

The Master of Science degree in child development is one of only two child development programs available in the CSU. With 106 community college child development programs, following the mandate of the Ryan Act, in California and 13 undergraduate programs within the CSU system, the M.S. program in child development plays a major role in training professionals for the State and region. The Department of Child and Family Development plays a leadership role in integration of curricula for community colleges and the CSU.

Child development is an interdisciplinary area of study. The Master of Science degree, administered by the Department of Child and Family Development, draws on the expertise of a multidisciplinary faculty who are committed to the study of children within the context of diverse families and communities and who are from the following areas: Chicana and Chicano Studies, Economics, Geography, Gerontology, Psychology, Public Administration and Urban Studies, Public Health, Special Education, Social Work, Sociology, and Women’s Studies. Emphasis in the program is placed on the central issue of “Child and Family Development Interventions” and offered through 13 courses from eight different departments.

Research interests and areas of expertise of the faculty include: abuse prevention, child and family advocacy, AIDS, attachment/bonding, children's literature, cross-cultural studies, curriculum development and evaluation, demography, economic development, families of divorce, full-inclusion programs for early interventions, intergenerational relationships, marital adjustment, multietnic families, parent-child relationships, parent training programs, peer relationships, political interventions, public policy, cross-cultural studies, stress management and coping strategies, and train the trainers models for service delivery to children and families.

Opportunities exist to participate in an ongoing multicultural project studying images of grandparents and the elderly in children’s books from different cultures. To date languages include Arabic, French, Hebrew, English, Russian, and Spanish. If you are interested in this project please contact Dr. Shulamit N. Ritblatt.

In addition, the Interdisciplinary Training Program on Early Intervention offers students field practice with transdisciplinary teams in hospitals, schools, and agency settings. Other field experience programs offer students supervised work in community agencies and children’s programs. The Child Study Center focuses on undergraduate and graduate training and research by operating a Campus Children’s Center in collaboration with SDSU’s Associated Students and San Diego City Schools. All children’s programs are mainstreamed and a wide range of special needs and at-risk populations are served by a full inclusion program.

Graduates qualify for administrator, coordinator, or service provider positions in preschools, day care centers, schools, hospitals, hospice centers, clinics, residential institutions, counseling centers, mental health centers, public welfare agencies, family service agencies, family planning clinics, community programs, business and industry, and government agencies. Graduates also qualify as community college instructors and can continue their education for the doctoral degree in human development or a related field.

1 Legislative linkages include Social Security Title IVA (Title XX), Title 5 and Title 22.

2 In collaboration with the Grossmont-Cuyamaca District strategies for competency-based curricula across all levels of child development programs throughout the State are being designed.
Admission to Graduate Study

Students will be admitted to the graduate program in child development only after careful consideration of their qualification by the Child Development Faculty Governing Board. All students must satisfy the general requirements for admission to the university with classified graduate standing as described in Part Two of this bulletin. In addition, a student applying for admission to the graduate program in child development must meet the following requirements for either Plan A (thesis) or Plan B (comprehensive examination).

Plan A and Plan B students applying for admission must meet the following requirements:

1. A bachelor's degree in child development or related fields or consent of the Child Development Faculty Governing Board.
2. Completion of prerequisites for the program of study. If students' undergraduate preparation is deemed insufficient, students will be required to complete specified courses (Child and Family Development 375A, 375B, 375C, and two units from Child and Family Development 378A, 378B, 378C, 378D) in addition to the minimum 31 units required for the master's degree in child development.
3. A grade point average of 3.0 in the last 60 semester units attempted.
4. Completion of the GRE General Test.
5. Completion of program application form.

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

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

Graduate Admissions

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

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

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

Department of Child and Family Development

Plan A applicants should mail or deliver following materials to:

Department of Child and Family Development
Attention: Dr. 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 written personal statement discussing background, interests, experiences, abilities, and career goals as they apply to the applicant's desire for a graduate degree in child development;
(4) Completion of a telephone or in person interview conducted by one or more members of the Child Development Faculty Governing Board.

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

Plan B applicants should mail or deliver the following materials to:

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

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part 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 units including at least 22 units of 600- and 700-numbered courses.

All students must complete:

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

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)

Multidisciplinary approach to child abuse and family violence including maltreatment, mistreatment, neglect, sexual abuse.

CFD 560. Theories in Socio-Emotional Development (3)

Socio-emotional development from infancy to adulthood. Theory of mind, emotional intelligence, and relationship-based development.

CFD 575. Public Policy and Professional Ethics in Child and Family Development (3)

Public policy and professional ethics as applied to child and family development, programs, and research.

CFD 577. 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.

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 emotional, psychological, and physical disorders. Etiology, development, and adjustment. Directed experience with special needs individuals and their families.
CFD 596. Advanced Studies in Child and Family Development (1-6)
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.

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.
City Planning

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

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

Faculty
Stuart D. Henry, Ph.D., Professor of Public Affairs, Director of School
Roger W. Caves, Ph.D., Professor of Public Affairs
Lawrence A. Herzog, Ph.D., Professor of Public Affairs
(Graduate Coordinator)
Louis M. Rea, Ph.D., Professor of Public Affairs
(M.P.A. 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. Detailed instructions concerning application procedures will be sent to the applicant along with all necessary forms. As there are specific requirements for the program it is not sufficient merely to file the general university admission forms. Students are admitted to the program in the fall and spring semesters of each year.

Upon admission to the program, the student must meet with the graduate adviser to determine the number of units of internship needed to satisfy the degree requirements.

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

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

Graduate Admissions
The following materials should be submitted as a complete package directly to:
Graduate Admissions
Enrollment Services
San Diego State University
San Diego, CA 92182-7416

(1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;
Note:
• Students who attended SDSU need only submit transcripts for work completed since last attendance.
• Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

(2) GRE scores
(3) TOEFL score, if medium of instruction was in a language other than English

School of Public Affairs
The following materials should be submitted by November 1 (October 1 for international students) for admission for the spring semester and May 1 for the fall semester to:
School of Public Affairs
Graduate City Planning Program
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4505

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

Advancement to Candidacy
All students must meet the general requirements for advancement to candidacy, as described in Part 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)
2. C P 630 Seminar in Urban Planning Implementation (3)
3. C P 640 Seminar in Urban Planning Theory (3)
4. C P 660 City Planning and Geographic Information Systems Applications (3)
5. C P 670 History of Urban Planning (3)
6. C P 675 Seminar in Environmental Policy and Planning (3)
7. C P 690 Seminar in Land Use Planning Principles and Techniques (3)
8. 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)
Two lectures and three hours of laboratory.
Prerequisite: Public Administration 604.
Contemporary techniques and methodologies of planning analysis; practicum emphasizing survey research, environmental impact techniques; case studies in demographic and economic analysis.

C P 630. Seminar in Urban Planning Implementation (3)
Analysis of the content and function of zoning, subdivision regulation, codes, capital budgeting, urban renewal, model cities, and other implementation methods and programs.

C P 635. Seminar in Housing and Housing Policy (3)
Study, definition and analysis of housing needs and problems. Public policies and programs addressed to housing issues. Alternative solutions and the role of the private and public sectors.

C P 640. Seminar in Urban Planning Theory (3)
Prerequisite recommended: City Planning 630.
Alternative theories of planning and organization of the planning function. Emphasis on conceptual foundations, relationship to governmental structure, decision making, and ideological and ethical orientations.

C P 660. City Planning and Geographic Information Systems Applications (3)
Prerequisites: Public Administration 525 and graduate standing. ArcGIS mapping software extensively utilized in city planning. Proficiency necessary to use software in professional context for work required by public and/or private sector planning employment.

C P 665. Seminar in Urban and Regional Planning Analysis (3)
Theories and techniques of urban and regional planning analysis.

C P 670. History of Urban Planning (3)
History of urban development and of the field of urban planning.

C P 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.
Prerequisites: Public Administration 630.
Land-use and physical planning principles and techniques at the regional, community, specific and subdivision planning levels.

C P 700. Urban Design and Land Use Planning Studio (6)
One lecture and ten hours of laboratory.
Prerequisite: City Planning 690.
Preparation of land-use plans and planning reports at the regional, community and subdivision levels.

C P 710. Seminar in Theories of Urban Design (3)
Perspectives and methodologies of contemporary urban design and its contribution toward improving the quality of the physical, social and economic environment.

C P 720. Seminar in Land Use and Environmental Law (3)
Cases and studies in zoning, coastal planning, growth management and environmental assessment.

C P 730. Seminar in Urban Transportation Planning (3)
Issues, techniques and practices in urban transportation planning with general emphasis on interrelations between transportation and land use planning.

C P 796. Internship in Urban Planning (3-6) 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 of 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.
Faculty
William B. Snively, Ph.D., Professor of Communication, Director of School
Peter A. Andersen, Ph.D., Professor of Communication
Wayne A. Beach, Ph.D., Professor of Communication
George N. Dionisopoulos, Ph.D., Professor of Communication
Patricia J. Geist-Martin, Ph.D., Emeritus, Professor of Communication
Susan A. Hellweg, Ph.D., Emeritus, Professor of Communication
Myron W. Lustig, Ph.D., Emeritus, Professor of Communication
Brian H. Spitzberg, Ph.D., Professor of Communication
Kurt J. Lindemann, Ph.D., Assistant Professor of Communication
Carmen M. Lee, Ph.D., Assistant Professor of Communication
Valerie R. Renegar, Ph.D., Associate 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) TOEFL score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682). For international applicants for whom English is not their first language, TOEFL paper scores of 550 or 213 online.

School of Communication
Submit a cover letter and application support materials to:
Graduate Adviser
School of Communication
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4560

Cover Letter
- 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.

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).
Application Support Materials

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

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

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

(4) A resume or vita

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

Specific Requirements for the Master of Arts Degree
(Major Code: 06011) (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, 706, 707, 715, 721, 735, 740, 745, 750, 751, 752, 755, 771, 783, 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 consent. 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.
COMM 665. Seminar: Conversation Analysis in Communication Research (3)
Prerequisite: Credit or concurrent registration in Communication 601.
Analysis of discourse data to explore and test theoretical models of communication. Emphasis on conversation analysis.

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. Maximum credit six units applicable to a master’s degree in communication.

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. Maximum credit six units applicable to a master’s degree in communication.

COMM 707. Seminar: Instructional Communication (3)
Prerequisite: Credit or concurrent registration in Communication 601. Communication relationships in instructional setting, teacher verbal and nonverbal immediacy, student communication apprehension, as a function of instructional modalities, and cultural diversity issues. Maximum credit six units applicable to a master’s degree in communication.

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. Maximum credit six units applicable to a master’s degree in communication.

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 applicable to a master’s degree in communication.

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. Maximum credit six units applicable to a master’s degree in communication.

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. Maximum credit six units applicable to a master’s degree in communication.

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. Maximum credit six units applicable to a master’s degree in communication.

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.
Computational Science

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

Master of Science Degree in Computational Science

The following materials mailed or delivered to:

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

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

(2) Personal statement of motivating interest for the program and briefly describe research interests and educational goals.

Ph.D. Degree in Computational Science

The following materials should be mailed or delivered to:

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

(1) Three letters of recommendation (in sealed and signed envelopes) from former or current professors, supervisors, or other appropriate persons;

(2) Applicant's statement of purpose, explaining their interest in the program;

(3) Claremont Graduate University application form available at http://www.csrc.sdsu.edu;

(4) Joint doctoral program in computational science application form available at http://www.csrc.sdsu.edu;

(5) Official transcripts (in sealed envelopes) from all 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:

1. 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)

2. Six units of approved 500-, 600-, or 700-level courses in disciplines related to the student's specialization.
3. Six units of approved 500-, 600-, or 700-level electives.
4. Six units of research including Thesis, 797 and 799.

A complete student program must be approved by the computational science program director. The requirements for entering this program consists of one year of computer programming in a programming language such as C or Fortran, competence in linear algebra and calculus, with background equivalent to a bachelor's degree in the area of interest.

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):**

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Units</th>
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<tbody>
<tr>
<td>COMP 526 Computational Methods for Scientists</td>
<td>3</td>
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<tr>
<td>COMP 536 Computational Modeling for Scientists</td>
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<tr>
<td>COMP 589 Computational Imaging</td>
<td>3</td>
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<tr>
<td>COMP 601 Seminar: Business Skills for the Information Age</td>
<td>3</td>
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<tr>
<td>COMP 602 Organizational Development</td>
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<td>COMP 603 Engineering Economics for Scientists</td>
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<tr>
<td>COMP 604 Computational and Applied Statistics</td>
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<tr>
<td>COMP 606 Designing Scientific and Industrial Experiments</td>
<td>3</td>
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<tr>
<td>COMP 607 Computational Database Fundamentals</td>
<td>3</td>
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<tr>
<td>COMP 626 Applied Mathematics for Computational Scientists</td>
<td>3</td>
</tr>
<tr>
<td>COMP 670 Seminar: Problems in Computational Science</td>
<td>3</td>
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<tr>
<td>COMP 671 Problem Solving Techniques</td>
<td>3</td>
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**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.

**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 advise 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 dean.

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

Claremont Graduate University
Program Director: John Angus
Committee Members: Angus, Cumberbatch, Dewey, Landsberg, Nadim, dePilli's, 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:
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, Ravali, 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 (POA/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 496, 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
diversity 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 super-
vision. 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.
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.

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.

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:
a. At least 18 units from Computer Science 600- and 700-level courses excluding Computer Science 797, 798, 799A. A 600-level electrical engineering course or one of the mathematics courses listed below in the ALC area of study may replace one 600-level computer science course.
b. At least one course from four of the following five areas of study: PFL, OSA, ALC, ISR, and DSW.
c. Comprehensive examinations in three subjects selected from data structures and algorithms; programming languages; numerical analysis; operating systems and architecture; automata and formal languages; intelligent systems and robotics. 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
(OSA) Operating Systems and Architecture: Computer Science 572, 574, 670, 674; Electrical Engineering 679.
(ALC) Algorithms and Complexity: Computer Science 558, 562, 566, 600, 660, 662, 664; Mathematics 525, 625, 635, 667, 668, 693A, 693B.
(ISR) Intelligent Systems and Robotics: Computer Science 550, 552, 553, 556, 559, 581, 582, 652, 656, 657, 682.

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)
Prerequisites: Computer Science 106 and 310.
Design and implementation of software for computational science. Makefiles in UNIX environment, efficient Fortran and C0 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.

CS 530. Systems Programming (3)
Prerequisites: Computer Science 237 and 310.
Design and implementation of system software. Relationship between software design and machine architecture. Topics from assemblers, loaders and linkers, macro processors, compilers, debuggers, editors. Introduction to software engineering and review of programming fundamentals and object oriented concepts. Large project in object oriented programming is required. Not acceptable for the M.S. degree in computer science.

CS 532. Software Engineering (3)
Prerequisites: Computer Science 320 and 530.
Theory and methodology of programming complex computer software. Analysis, design, and implementation of programs. Team projects required.

CS 533. Component Based Software Engineering (3)
Prerequisites: Computer Science 310 and 320.
Component based (CB) software development using UML and other design methods. Development of components for use in CB systems; CB software architectures; development of CB systems; comparison of traditional and CB system development methods.

CS 534. Software Measurement (3)
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 550. Artificial Intelligence (3)
Prerequisites: Computer Science 108 and either Mathematics 245 or 523.

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 561. Web Application Development (3)
Prerequisite: Computer Science 310.
Architectural elements for programming web pages and dynamic Web sites. Development of web applications using xhtml, CSS, client-side browser languages, and dynamic web applications using backend server languages with database systems.

CS 562. Automata Theory (3)
Prerequisite: Mathematics 245 or 521A.

CS 566. Queueing Theory (3)
Prerequisites: Computer Science 108 and Statistics 119 or 250.
Performance prediction of computer networks and other systems (e.g., inventory control, customer service lines) via queuing theory techniques. Operational analysis.

CS 570. Operating Systems (3)
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.

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 574.
Basic networking concepts such as seven-layer reference model, transmission media, addressing, subnetting and super-netting, networking devices, LANs and WANs, internetworking, distributed processing, and client-server model. Basic concepts and protocols of TCP/IP protocol suite and basic Internet services.

CS 580. Client-Server Programming (3)
Prerequisites: Computer Science 570 and knowledge of an object-oriented programming language. Recommended: Computer Science 576.
Client-server model, networking protocols for client-server programs, algorithmic issues in client-server programs, client-server protocols, implementing client-server applications.

CS 581. Computational Linguistics (3)
(Same course as Linguistics 581)
Prerequisites: Computer Science 320 or Linguistics 571; Linguistics 570 or Mathematics 245.

CS 582. Introduction to Speech Processing (3)
Prerequisite: Computer Science 310.

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. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

NOTE: Classified graduate standing is expected for all graduate courses.

CS 600. Methods in Bioinformatics, Medical Informatics, and Cheminformatics (3)
Prerequisites: Three units of calculus and graduate standing. Computer, mathematical, and engineering techniques for bioinformatics, cheminformatics, and medical informatics. Techniques used in microarray data analysis, gene and protein sequence alignment, and classification techniques in medical decision making.

CS 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 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)
Prerequisite: Computer Science 561.
System aspects of multimedia authoring, browsing, and database subsystems. Formal models for hypermedia documents. Conversion of flat text into hypertext. Artificial intelligence in hypermedia systems. Architectures, design, and implementation of multimedia support systems. Use of multimedia technology in software engineering.

CS 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 656. Advanced Robotics (3)
Prerequisite: Computer Science 556.
Computer-based techniques for low-, medium-, and high-level robot control including sequential and parallel schemes for robot dynamics, robot programming and robot task planning.

CS 657. Intelligent Systems and Control (3)
Prerequisites: Computer Science 535 and 560 or Computer Science 530.
Genetic and evolutionary algorithms, genetic programming and applications, fuzzy logic and approximate reasoning, rule-based inference engines, intelligent path planning and applications to robotics, dynamic systems and their simulations using Simulink, conventional control and intelligent control, intelligent agents, autonomous and multi-agent systems.

CS 660. Combinatorial Algorithms and Data Structures (3)
Prerequisite: Computer Science 560.
Algorithm design techniques. Network flow and matching. Complexity analysis. NP-completeness, reductions among NP-complete problems. Approximation algorithms for NP-complete problems such as the traveling salesman problem.

CS 662. Theory of Parallel Algorithms (3)
Prerequisites: Computer Science 560 and Mathematics 254.

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 674. Advanced Computer Architecture (3)
Prerequisite: Computer Science 572.
Advanced computer architecture, including parallel and distributed architecture, and accompanying software and algorithmic issues.

CS 676. Advanced Computer Networks and Distributed Systems (3)
Prerequisite: Computer Science 576.
Advanced concepts of communication networks and distributed systems that follow basic TCP/IP protocols, such as BOOTP, DHCP, SNMP, IGMP, multicasting and multicast routing, real-time traffic and protocols, voice over IP, quality of service and RSVP, MPLS, virtual private networks, mobile IP.
CS 678. Broadband Communication Networks (3)
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: Consent of instructor.
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 700. 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.
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

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

School of Public Affairs
The following materials should be mailed or delivered to:
School of Public Affairs/
Master of Criminal Justice and Criminology
(Attention: Dr. Dana M. Nurge)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4505

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

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy as described in Part 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):
- PA 604 Methods of Analysis in Public and Urban Affairs (3)
- OR
- SOC 602 Advanced Research Methods: Core Course (3)
- PA 606 Seminar in Quantitative Approaches to Public Administration (3)

Criminal Justice and Criminological Theory (3 units required):
- SOC 743 Seminar in Criminology and Criminal Justice Theory (3)

Electives (3 units required):
- CJ 570 Organized Crime: Domestic and International Perspectives (3)
- CJ 796 Internship in Criminal Justice (3) Cr/NC
- PA 660 Administration and Public Policy Development (3)
- PA 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

Course descriptions for courses can be found in the Public Administration section of this bulletin and under the other appropriate headings.

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

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Interim Chair of Department
Catalina Amuede-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
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
Jennifer Imazeki, Ph.D., Associate Professor of Economics
Thitima Puttitanun, Ph.D., Associate Professor of Economics
Hisham S. Foad, Ph.D., Assistant Professor of Economics
Phacharaphot Nuntramas, Ph.D., Assistant Professor of Economics
Quazi Shahriar, Ph.D., Assistant Professor of Economics

Associateships

A number of teaching and research associateships are available for qualified students. Appointments permitting up to 20 hours of service per week are available. In addition, students interested in pursuing teaching careers at the community college level may apply for a teaching apprenticeship position. Application forms and additional information may be obtained from the graduate student coordinator of the Department of Economics.

Scholarships

The Department of Economics administers two scholarship programs that are available to qualified students. Incoming students may apply for a Terhune scholarship. Terhune Scholarships are designed to cover tuition and fees for the first year of graduate study. The Center for Public Economics annually awards several scholarships ranging from $300 to $1,500 in the spring semester. Application forms and additional information for these programs may be obtained from the graduate student coordinator of the Department of Economics.

General Information

The Department of Economics offers a Master of Arts degree in economics. The program provides students with advanced training in decision-making techniques and quantitative analysis by building on a core of applied microeconomic and econometric classes. Students learn to apply analytic methods to business and policy issues, use advanced econometric methods and computer software. An internship program provides students with valuable work experience. The program is designed to (1) prepare students for careers in consulting, domestic and multinational firms and government agencies, (2) provide students with university-level teaching experience and access to community college teaching positions, and (3) provide advanced training in economics for students planning on entering a Ph.D. program.

Admission to Graduate Study

Students applying for admission to the Master of Arts program in economics should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee 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 as a complete package directly to:

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

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

Note:

• Students who attended SDSU need only submit transcripts for work completed since last attendance.

• Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

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

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

Department of Economics

The following materials should be submitted 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)

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 507. Mathematical Economics (3)
- ECON 561. International Trade (3)
- ECON 565. North American Economic Relations (3)

One course selected from the following:

- C P 625 Quantitative Techniques in Urban Planning (6)
- GEOG 584 Geographic Information Systems Applications (3)
- GEOG 683 Advanced Geographic Information Systems (3)

One course selected from the following:

- C P 665 Seminar in Urban and Regional Planning Analysis (3)
- GEOG 596 Advanced Topics in Geography: Urban and Regional Policy (3)
- GEOG 685 Advanced Quantitative Methods in Geography (3)
- GEOG 780 Seminar in Techniques of Spatial Analysis (3)

**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.

- 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.

- 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

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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.
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.

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 92182-1179

(1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended:
Note:
• Students who attended SDSU need only submit transcripts for work completed since last attendance.
• Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

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

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

Doctor of Philosophy (Ph.D.) Degree in Education

The following materials should be submitted by January 31 for the fall semester to:
Joint Ph.D. Program in Education
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1105

(1) Program application;
(2) Three 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.html. 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 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 to 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, educational technology, and special education.

San Diego State University

Director: Rafaela M. Santa Cruz

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)**
- 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)**
- ARP 727 Emerging Issues in Postsecondary Educational Leadership (3)
- ARP 760 Internship in Educational Leadership (3) Cr/NC/RP
- ARP 801 Seminar in Community College History and Development (3)
- ARP 810 Seminar in Community College Law and Finance (3)
- ARP 811 Seminar in External Partnerships for Community Colleges (3)
- ARP 812 Seminar in Budget and Resource Management in Community Colleges (3)
- ARP 813 Strategic Planning in Community Colleges (3)

A minimum of 30 units or equivalent of residency is required before a student is eligible to take the qualifying examination.

The program is designed to be completed in three calendar years including summer sessions. Classes are held during the late weekday afternoons/evenings, on weekends, and during the summer to accommodate the schedules of working adults. Some classes include a blend of in-class and distance learning technologies.

**Dissertation**

All doctoral students will complete a rigorous research-based dissertation integrating theory and research in the study of educational practice. The dissertation will include the results of the doctoral student's independent research and will typically focus on an examination of (a) an educational issue, (b) a practice or program, (c) an educational policy, reform, or improvement, or (d) implementation studies within an educational organizational. Most dissertations will be studies undertaken in the local context, having the potential to contribute to solutions of educational problems. Dissertations will use a range of qualitative and quantitative research and evaluation methods. The dissertation will present the results of the doctoral student's independent investigation in a manner that contributes both to professional knowledge in education and to the improvement of educational practice.

The primary goal of the dissertation is to generate knowledge that contributes to the understanding of educational practices, policies, reforms or improvements. Doctoral students who have not completed their dissertation after 12 semester units, must maintain continuous enrollment in the university by registering for at least one unit per semester.

**Final Examination (Oral)**

The dissertation committee, consisting of two university faculty and at least one community member, will conduct a final oral examination during which the doctoral student defends the dissertation. The dissertation defense will address the theoretical and conceptual background, relevant literature, data collection techniques, data analysis strategies, and results and implications concerning the question(s) studied.

**Additional Requirements**

Doctoral students who have not earned the professional administrative credential will be able to do so while enrolled in the Ed.D. program. PreK-12 doctoral students must complete additional practicum activities to demonstrate their competence in each of the principles of administrative practice specified by the California Commission on Teacher Credentialing.

All doctoral students are expected to complete an internship as part of their concentration. The internship (3 units) will typically occur at the end of the doctoral student's coursework and will be congruent with the doctoral student's professional goals.

**Performance Expectations**

Doctoral students must maintain a 3.0 GPA to be in good standing. Doctoral students who have a grade point average below 3.0 in two successive terms will be disqualified from the program. They must meet all the requirements of graduate doctoral students outlined in the Graduate Bulletin. In addition, doctoral students who are enrolled in the professional administrative credential must meet the standards set forth in the California Commission on Teacher Credentialing approved program documents submitted by SDSU.

Doctoral students who fail to make satisfactory academic progress may be officially disqualified from the university in writing after consultation with the executive committee. A doctoral student may be disqualified because of unsatisfactory academic progress only after a careful review and written recommendation by the Ed.D. 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, Degenni, Hampton, Harris, Jacobs, Jeffcoat, McFarlane, Olney, Piland, Sax

- **Educational Leadership**
  - Bascom, Brown, Cohn, Johnson, Meno, Pumpian, Uline
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/soles/acadprogs/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 units, 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.

Doctor of Education Degree (SDSU/USD)
(Major Code: 08011) (SIMS Code: 331902)
http://www.sandiego.edu/soles/learning_and_teaching/graduate_programs/joint_doctoral/

No new students are being admitted to this program until further notice.

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

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, Zyglinska

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.

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

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, Zyglinska
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:
   a. Official transcripts (in sealed envelopes) from all postsecondary institutions attended;
   b. GRE scores (official notification);
   c. If medium of instruction was in a language other than English, official notification of TOEFL score plus Test of Written English.

3. The following materials should be submitted as a complete package to:
   a. School Psychology Program Admissions Committee
   b. Department of Counseling and School Psychology
   c. College of Education, San Diego State University
   d. 5500 Campanile Drive
   e. San Diego, CA 92182-1179
   f. Completed program application checklist;
   g. Three letters of recommendation;
   h. Personal statement;
   i. Curriculum vita;
   j. The California Basic Educational Skills Test (CBEST) (Out-of-state applicants may take the CBEST in their first semester);
   k. 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 the 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: English – Learners (1) Cr/NC
   CSP 643C Psychoeducational Evaluation Techniques: Spanish – Speakers (proficiency required) (1) Cr/NC
   *CSP 644 Academic Assessment-Intervention (3)
   CSP 744 Cognitive Assessment-Intervention (3)
   Or other course(s) in the department or in a related field approved by adviser.

7. Interventions (a minimum of 12 units)
   CSP 680 Theory and Process of Consultation (3)
   And a minimum of nine units from the following:
   *CSP 600 Cross-Cultural Counseling Communication Skills (2)
   *CSP 600L Cross-Cultural Counseling Practicum (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.
Admission to Graduate Study

Students applying for admission should electronically submit the university application available at [http://www.csumentor.edu](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:
- 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](http://www.ets.org), SDSU institution code 4682);

3. TOEFL score, if medium of instruction was in a language other than English ([http://www.ets.org](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/](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](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](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](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/](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.
Education

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), 791B (1 unit), and 791C (2 units); or Education 791A (3 units) and 791B (3 units); or Education 795A (3 units) and 795B (3 units). All candidates for the Master of Arts degree in education who elect Plan B must pass a comprehensive examination.

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. Information on exact dates, and for a reservation, may be obtained from 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 an 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 proficiency 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)
   d. Electives (6-9 units): Selected in consultation with adviser and may include courses listed above.
   e. Research (3-6 units):

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...
Specific Requirements for the Master of Arts degree in Education with a Concentration in Educational Leadership and a Specialization in Postsecondary Education.

A minimum of 30 units to include:

1. Core program: Six to nine units selected from the following:
   - ARP 605 Postsecondary Education (3)
   - ARP 610 Educational Leadership (3)
   - ARP 747 Educational Leadership in a Diverse Society (3)

2. Six to nine units selected, with the approval of the graduate adviser, from the following:
   - ARP 611 Program Development and Evaluation in Postsecondary Education (3)
   - ARP 631 Seminar in Teaching in Postsecondary Education (3)
   - ARP 680 Seminar in Administration, Rehabilitation and Postsecondary Education (3)
   - ARP 720 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).

4. ED 690 Methods of Inquiry (3)

5. Research: Three to six units selected from the following:
   - ED 791A Evaluation Techniques (3)
   - ED 791B-791C Practicum: Evaluation (1-3) or
   - ED 795A-795B Seminar (3-3) or
   - ED 799A Thesis (3) 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: 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).

4. ED 690 Methods of Inquiry (3)
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.

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.

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 advisor’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-791C Practicum: Evaluation (1-3) or ED 795A-795B Seminar (3-3 units) or ED 799A Thesis (3 units) Cr/NC/RP

Specialization in Educational Computing within Educational Technology Concentration
(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 Postsecondary Education 605, 631, 730, 747; Policy Studies in Language and Cross-Cultural Education 601, 612; Teacher Education 631, 639.

Elementary Curriculum and Instruction
(Major Code: 08021)(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. Prerequisites: 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-791C, Evaluation (3-1-3 units); or Education 795A-795B, Seminar (3-3 units); or Education 799A, Thesis (3 units) Cr/NC/RP.

The program of study must include at least 15 units of 600- and 700-level courses.

The Master of Arts degree in Education with a concentration in Elementary Curriculum and Instruction is also offered at the Imperial Valley Campus. For course requirements consult the Imperial Valley Campus Bulletin.

Mathematics Education (K-8)
(Major Code: 17012)

The Master of Arts degree in education with a concentration in K-8 mathematics education is designed to provide teachers a deeper understanding of issues in learning and teaching mathematics in grades K-8, and increased knowledge of current trends, research, and assessment in mathematics education. Students can expect to acquire new perspectives and skills about mathematics teaching, specialized knowledge of children’s mathematical understanding, and preparation for leadership among teachers in mathematics teaching.

1. Prerequisites: Applicant must have at least one year of teaching experience or consent of program coordinator, and must file an application for admission to both the university and the K-8 mathematics education program. Successful applicants must demonstrate personal, professional, and academic potential for success in this program. For specific admission criteria see the K-8 Mathematics Education Master of Arts program Web site at http://coe.sdsu.edu/departments/MathEd/master.htm.

2. Core Program (12 units):
   - MTHED 600 Teaching and Learning Mathematics in Early Grades (Pre-K to 4) (3)
   - MTHED 601 Teaching and Learning Mathematics in the Middle Grades (3)
   - MTHED 603 Seminar on Learning Theories in Mathematics Education (3)
   - TE 511 Assessment in Mathematics Education (3)

3. Electives (9 units): With the approval of the adviser, select three courses from the following:
   - PLC 553 Language Assessment and Evaluation in Multicultural Settings (3)
   - PLC 601 Language Policies and Practices (3)
   - EDET 540 Educational Technology (3)
   - EDET 541 Educational Web Development (3)
   - EDET 570 Advanced Teaching with Technologies (3)
   - EDET 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.
Education

Students in each specialization will take a core of nine units in the Policy Studies in Language and Cross-Cultural Education Department. All students in Plan B will also take a comprehensive examination covering coursework for the M.A. degree.

It is recommended that students enroll in PLC 686 in preparation for the comprehensive examination.

Research: 9 units total.

ED 690 Methods of Inquiry (3) and
ED 795A-795B Seminar (6) or
ED 799A Thesis (3) Cr/NC/RP and
ED 797 Research (3) Cr/NC/RP

Plan I: Curriculum and Critical Pedagogy Specialization

Core:
PLC 600A Foundations of Democratic Schooling (3)
PLC 601 Language Policies and Practices (3)
PLC 650 Curriculum Development for Urban School Communities (3)

Specialization: Select 12 units from the following with consent of adviser:
PLC 553 Language Assessment and Evaluation in Multicultural Settings (3)
PLC 596 Special Topics in Bilingual and Multicultural Education (3)
PLC 603 Community and Schools in a Diverse Society (3)
PLC 612 Qualitative Inquiries in Communities and Schools (3)
PLC 613 Organizational Strategies and Professional Development for the Multicultural School Community (3)
PLC 651 Curriculum, Teaching, and Assessment: ELD and SDAIE (3)
PLC 652 Literacy and Language: Critically Examining Curriculum for Teaching and Learning (3)
PLC 686 Seminar in Multicultural Education (1-6)
PLC 798 Special Study (1-6) Cr/NC/RP

Plan II: Outside Specialization

Core:
PLC 600A Foundations of Democratic Schooling (3)
PLC 601 Language Policies and Practices (3)
PLC 650 Curriculum Development for Urban School Communities (3)

Specialization: Nine units taken outside the Department of Policy Studies in Language and Cross-Cultural Education with consent of graduate adviser, and a cooperating department or program.

Reading Education

(Major Code: 080301) (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: 080301) (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 Literacy in Education; or TE 656, Struggle for American Curriculum; or related courses with approval of adviser.

4. Electives (15 units) selected with the approval of the graduate adviser on the basis of the student’s interests, goals and needs. A minimum of three units must be in 600- or 700-numbered courses. A maximum of six units may be selected from cognate fields outside the College of Education.

5. ED 791A Evaluation Techniques (3) and
   - ED 791B-791C Practicum: Evaluation (1-3) or
   - ED 795A-795B Seminar (3-3) units or
   - ED 799A Thesis (3 units) Cr/NC/RP and Electives (3 units)

The Master of Arts degree in Education with a concentration in Secondary Curriculum and Instruction is also offered at the Imperial Valley Campus. For course requirements consult the Imperial Valley Campus Bulletin.

Special Education

(Major Code: 080801) (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 B.S. 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 specializations and 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.

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.
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 or 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, 658, 771, and six units selected with approval of adviser.
Related Fields (6-9 units 500-level or above) by advisement or Advanced Specialization (6 units): Special Education 650 and three units of electives selected with approval of adviser.
Research (6-9 units): Education 690* and Education 791A, 791B-791C; or 795A*-795B* or 799A.

Specialization in Early Childhood
(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, 791C 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, 791C or Education 799A.

Specialization in Moderate/Severe Disabilities
(Major Code: 08081) (SIMS Code: 331989)
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, 791C or Education 799A* in departmentally approved sections.

Specialization in Vocational Transition
(Major Code: 08081) (SIMS Code: 331990)
Prerequisites: 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, 667; and 3-6 units of approved electives at the 600 or 700 level.
Culminating Experience (3-6 units): Education 795A*-795B* or Education 791A, 791B, 791C or Education 799A.
*In departmentally approved sections.

Master of Arts in Teaching Degree

Admission to the Degree Curriculum
Applicants must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. An applicant may apply nine units of post-baccalaureate teaching 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)
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)

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### 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, habilitation of deaf and hard of hearing consumers, mental health, career assessment, administration of rehabilitation programs, disability management, diversity program development and work within the public and private sectors. The degree is accredited by the Commission on Rehabilitation Education (CORE). A limited number of graduate stipends from the Rehabilitation Services Administration are available to (1) students who are committed to entering rehabilitation in publicly supported programs after graduation, and (2) students with a financial need. Graduates qualify for CRC and CWAVES certification. A limited number of students may qualify for admission to the Pupil Personnel Services – School Counseling Credential track, under a collaborative agreement with the Department of Counseling and School Psychology.

#### Admission to the Degree Curriculum

All students must satisfy the general requirements for admission to the university with classified graduate standing as described in Part Two of this bulletin. The student must file an application for admission to San Diego State University with both the Office of Graduate Admissions and the Rehabilitation Counseling Program.

Students seeking admission to the graduate program which leads to a Master of Science degree in rehabilitation counseling should address their inquiries to the coordinator of the program. Detailed instructions concerning application procedures are available at [http://www.interwork.sdsu.edu/arpe/](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 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 Study is offered. Applicants interested in the community based block program should refer to this section on M.A. in Education Counseling.

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:

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.

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 simultaneously 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)

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Financial Assistance

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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.

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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 simultaneously enroll in school counseling, school psychology, and marriage and family therapy.

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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 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 22 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 49B80.40, students must complete an additional two to ten units, depending on the students’ designated 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)

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
- 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:

1. **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.

2. **Common Core (6 units):**
   - ED 690  Methods of Inquiry (3)
   - CSP 600  Cross-Cultural Counseling Communication Skills (2)
   - CSP 600L  Cross-Cultural Counseling Prepracticum (1) Cr/NC

3. **Foundations (minimum 6 units):**
   - CSP 610C  Determinants of Human Behavior: Development (1-3)
   - CSP 610D  Determinants of Human Behavior: School Learning (1-3)
   - CSP 615  Seminar in Multicultural Dimensions in Counseling (3)

4. **Theory, Research, and Techniques (21 units selected in consultation with adviser):**
   - CSP 601  Theoretical Foundations of Counseling and Marriage and Family Therapy (3)
   - CSP 622A  Ecosystems Assessment–Intervention I: Students (3)
   - CSP 622B  Ecosystems Assessment–Intervention II: Schools (3)
   - CSP 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)

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5. **Integration and Application of Theory, Research, and Techniques** (minimum nine units selected in consultation with adviser):
   - CSP 730 Fieldwork in Counseling: School Counseling (3) Cr/NC
   - CSP 740 Practicum (1-6) Cr/NC

6. **Additional requirements for concentration** (minimum three units selected in consultation with adviser):
   - CSP 620 Guidance Services in Public Education (3)
   - CSP 745 Program Development and Evaluation in Pupil Services (3)
   - CSP 689 Family Counseling in the Schools (1)

7. **Research** (minimum three units selected in consultation with adviser):
   - CSP 710A Professional Seminar (3)
   - CSP 799A Thesis (3) Cr/NC/RP

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**Section III. Teaching and Service Credentials**

**Teaching and Service Credentials (Credential Code: 00100)**

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

- Policy Studies in Language and Cross-Cultural Education Department (EBA-248)
  - San Diego State University
  - San Diego, CA 92182-1152

1. **Department application** (available at the department Web site);
2. California Subject Examination for Teachers (CSET) scores or adviser recommendation;
3. California Basic Educational Skills Test (CBEST) scores;
4. GRE scores (required for the CBEST to be eligible for the credential);
5. **Verification of early field experience** (30 hours for multiple subject and 45 hours for single subject);
6. **Certificate of clearance** (live scan);
7. **CPR** that includes infant/child/adult;
8. A written three pages (1-1/2 each) of essays on goals and philosophy in education and an autobiography;
9. $25 application processing fee;
10. Entrance interview will be conducted by one or more PLC faculty members.

**Single Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD) Emphasis Credential: Spanish**

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

- Policy Studies in Language and Cross-Cultural Education Department (EBA-248)
  - San Diego State University
  - San Diego, CA 92182-1152

1. **Department application** (available at the department Web site);
2. California Subject Examination for Teachers (CSET) scores or adviser recommendation;
3. Multiple Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD) Emphasis Credential: Spanish
   - Academic Development (BCLAD) Emphasis Credential: Spanish
5. **Verification of early field experience** (30 hours for multiple subject and 45 hours for single subject);
6. **Certificate of clearance** (live scan);
7. **CPR** that includes infant/child/adult;
8. A written three pages (1-1/2 each) of essays on goals and philosophy in education and an autobiography;
9. $25 application processing fee;
10. Entrance interview will be conducted by one or more PLC faculty members.

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**Admission to Graduate Study**

Students applying for admission should electronically submit the university application available at [http://www.csumentor.edu](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](http://www.ets.org), SDSU institution code 4682)
   - GRE is not required for teaching credential programs;
3. **TOEFL score**, if medium of instruction was in a language other than English ([http://www.ets.org](http://www.ets.org), SDSU institution code 4682).

**Multiple Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD) Emphasis Credential: Spanish**

(1) Complete department application (available at the department Web site);
(2) Copy of scores for CBEST/Spanish Proficiency Examination/CSET;
(3) TB test results;
(4) Three letters of recommendation, one of which must be from an elementary teacher if multiple subject or from a secondary teacher if single subject;
(5) **Verification of early field experience** (30 hours for multiple subject and 45 hours for single subject);
(6) **Certificate of clearance** (live scan);
(7) **CPR** that includes infant/child/adult;
(8) A written three pages (1-1/2 each) of essays on goals and philosophy in education and an autobiography;
(9) $25 application processing fee;
(10) Entrance interview will be conducted by one or more PLC faculty members.
Reading/Language Arts Specialist Credential  
(Credential Code: 00410)  
The following materials should be mailed or delivered to:  
School of Teacher Education  
(Attention: Pamela J. Ross)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1153  
(1) Department application (paper only);  
(2) Personal statement;  
(3) Three letters of reference on official letterhead.  

Education Specialist Credentials in Special Education  
The following materials should be mailed or delivered to:  
Department of Special Education  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92108-1170  
(1) Department application packet.  

General Information  
The College of Education offers programs which lead to teaching, specialist, and services credentials. The School of Teacher Education (STE) offers programs for the SB 2042 preliminary credential. The Department of Policy Studies in Language and Cross-Cultural Education (PLC) offers programs for the SB 2042 preliminary BCLAD bilingual (Spanish) credential. Students who desire to seek a credential should consult with departmental advisers in order to determine their status and needed requirements. Information on these credentials is available in the Office of Advising and Recruitment, EBA-259.  
The College of Education has obtained approval for programs leading to the following credentials:  

<table>
<thead>
<tr>
<th>Approved Credential Program</th>
<th>School Service Authorized</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Multiple Subject* (SB 2042)</td>
<td>Teach in self-contained classrooms and provide Specially Designed Academic Instruction in English (SDAIE) and English Language Development (ELD), kindergarten through twelfth grade.</td>
</tr>
<tr>
<td>2. Multiple Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD), emphasis: Spanish**</td>
<td>Teach in self-contained classrooms and in primary language and English, English Language Development (ELD), and Specially Designed Academic Instruction in English (SDAIE).</td>
</tr>
<tr>
<td>3. Single Subject* (SB 2042)</td>
<td>Teach single subject area in grades K-12 and provide Specially Designed Academic Instruction in English (SDAIE) and English Language Development (ELD).</td>
</tr>
<tr>
<td>4. Single Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD), emphasis: Spanish**</td>
<td>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).</td>
</tr>
</tbody>
</table>

5. Special Education:  
Education Specialist Credential for the Deaf and Hard of Hearing (School of Speech, Language, and Hearing Sciences)  
Early Childhood Special Education  
Mild/Moderate Disabilities  
Moderate/Severe Disabilities  

Teach special education students in the programs designated by each education specialist credential.  

* See School of Teacher Education, EBA-255, 619-594-6131 for more information.  
** See Department of Policy Studies in Language and Cross-Cultural Development, EBA-248, 619-594-5155 for more information.  

Education Specialist Credentials*  
Specialist Credentials  
Reading/Language Arts  

Service Credentials  
Administrative Services  
Clinical – Rehabilitative Services (School of Speech, Language and Hearing Sciences)  
Health – School Nurse Services (School of Nursing)  
Pupil Personnel Services:  
Child Welfare and Attendance (School Social Work)  
School Counseling (see M.S. in Counseling, concentration in School Counseling)  
School Psychology (see Ed.S. in School Psychology)  
School Social Work (School of Social Work)  

Specialist Certificates  
Bilingual Cross-Cultural Language and Academic Development (BCLAD)  
Cross-Cultural Language and Academic Development (CLAD)  
Developing Gifted Potential  
Early Childhood Special Education  
Resource Specialist of Competence  
Supported Employment and Transition Specialist  
Teaching the Emotionally Disturbed/Behaviorally Disoriented  

* See Department of Special Education, NE-70, 619-594-6665 for more information.  

Information Applicable to Multiple Subject and Single Subject (SB 2042/BCLAD) Credentials  
Departmental admission to Multiple Subject or Single Subject (SB 2042) credential program (including BCLAD) does not constitute admission to the university. Candidates who are entering the university for the first time, or who have graduated or who are graduating, and are planning to re-enroll for the credential program must file a separate application for admission to the university during the regular university application period.
Students Who Seek to Complete a Credential

Teachers with Preliminary RYAN Multiple Subject or Single Subject credentials who are working toward Professional Clear certification may have individual programs designed to meet their needs and interest areas. Arrangements for evaluation of college credit and program design can be made through the Credentials Processing Center, 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 BCLAD Single and Multiple Subject teachers can be granted supplementary authorizations to teach in generalized areas in middle and junior high schools (e.g., Introductory English). Single subject teaching credential candidates can also be granted supplementary authorizations to teach in specialized areas K-12 (e.g., psychology). Information on requirements for these supplementary authorizations is available through the Credentials Processing Center, EBA-259.

Multiple Subject Credential (Elementary Education) (Credential Code: 00200)

Multiple Subject–Preliminary Credential

Persons interested in teaching in the traditional elementary school will typically pursue the Multiple Subject credential which authorizes teaching service in self-contained classrooms in preschools, grades K-12, and in classes organized primarily for adults (classrooms in which one teacher is responsible for all the subjects commonly taught). Recommendation for this credential requires:

1. A baccalaureate or higher degree.
2. Completion of an approved program of professional education, including student teaching and coursework in reading methods with a grade point average of 3.0 or higher.
3. Basic skills competency as demonstrated through passing scores on the California Basic Educational Skills Test (CBEST).
4. Demonstrated subject matter competency by passing the Multiple Subjects examination of the California Subject Examinations for Teachers (CSET). Must have scores taken within five years prior to recommendation.
5. Successful completion of the 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; Health and Human Services 280 or Public Health 101 or approved equivalent.
9. Demonstrated knowledge of the needs of and methods of providing educational opportunities for individuals with exceptional needs: Special Education 450 or 496.
10. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): Educational Technology 470.
11. Verify current training in cardiopulmonary resuscitation (CPR). Verification of the CPR training is made through submission of a photocopy of the card issued by the training agency. While many agencies provide CPR training, verification must be made at levels identified by the American Heart Association (AHA) or the American Red Cross (ARC). Candidates pursuing training through agencies other than these will be required to verify the level of training relative to either the AHA or ARC standards either from the data provided directly on their card or on a supplementary letter or 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. Health and Human Services 280 or Teacher Education 296, “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 tuberculin 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://edweb.sdsu.edu/site/teachprospective.htm

Either the original or a photocopy of the Early Field Experience Guide must be turned in as part of the application to the credential program.

9. Personal Narrative. The narrative (two copies submitted in application) should address the following items:
   a. The candidate’s interest in and motivation for a teaching career in a multicultural setting;
   b. The candidate’s personal background and experience in working with children in multicultural settings;
   c. Other experiences personally considered important in the teacher preparation process;
   d. Any abilities, knowledge, skills, or experience that will enhance the candidate’s effectiveness as a teacher (e.g., ability to speak another language, play a musical instrument, use technologies, or experience working with individuals with disabilities or special needs).

10. Appeals Process. Candidates who do not meet all the admission requirements may petition the Multiple Subject Admissions and Retention Committee for individual consideration; petition 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 advisor 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.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE 902</td>
<td>Classroom Management Skills</td>
<td>1</td>
</tr>
<tr>
<td>TE 910A</td>
<td>Teaching Mathematics in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>TE 910B</td>
<td>Teaching Social Studies in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>TE 910C</td>
<td>Teaching Science in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>TE 923</td>
<td>Psychological Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td>TE 930</td>
<td>Teaching Reading and Language Arts in the Elementary School</td>
<td>6</td>
</tr>
<tr>
<td>TE 960</td>
<td>Basic Student Teaching Seminar (Cr/NC)</td>
<td>2</td>
</tr>
<tr>
<td>TE 961</td>
<td>Advanced Student Teaching Seminar (Cr/NC)</td>
<td>2</td>
</tr>
<tr>
<td>TE 965</td>
<td>Basic Student Teaching in Elementary Schools (Cr/NC)</td>
<td>8</td>
</tr>
<tr>
<td>TE 966</td>
<td>Advanced Student Teaching in Elementary Schools (Cr/NC)</td>
<td>8</td>
</tr>
<tr>
<td>ED 970</td>
<td>Teaching Event Assessment (Cr/NC)</td>
<td>3</td>
</tr>
<tr>
<td>EDTEC 470</td>
<td>Technologies for Teaching</td>
<td>3</td>
</tr>
<tr>
<td>PLC 915A</td>
<td>Teaching and Learning in the Content Area: ELD/SDAIE: Multiple Subjects</td>
<td>3</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE 910C</td>
<td>Teaching Science in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>TE 923</td>
<td>Psychological Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td>TE 930</td>
<td>Teaching Reading and Language Arts in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>ETEC 470</td>
<td>Technologies for Teaching</td>
<td></td>
</tr>
<tr>
<td>PLC 915A</td>
<td>Teaching and Learning in the Content Area:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ELD/SDAIE: Multiple Subjects</td>
<td>3</td>
</tr>
</tbody>
</table>

### Semester 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE 362</td>
<td>Fieldwork in Community Settings</td>
<td>4</td>
</tr>
<tr>
<td>TE 902</td>
<td>Classroom Management Skills and PACT Seminar</td>
<td>2</td>
</tr>
<tr>
<td>TE 910A</td>
<td>Teaching Mathematics in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>TE 910B</td>
<td>Teaching Social Studies in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>TE 930</td>
<td>Teaching Reading and Language Arts in the Elementary School</td>
<td>3</td>
</tr>
</tbody>
</table>

### Semester 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE 961</td>
<td>Advanced Student Teaching Seminar (Cr/NC)</td>
<td>2</td>
</tr>
<tr>
<td>TE 966</td>
<td>Advanced Student Teaching in Elementary Schools (Cr/NC/RP)</td>
<td>12</td>
</tr>
<tr>
<td>ED 970</td>
<td>Teaching Event Assessment (Cr/NC)</td>
<td>3</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE 910A</td>
<td>Teaching Mathematics in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>TE 910B</td>
<td>Teaching Social Studies in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>TE 910C</td>
<td>Teaching Science in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>TE 923</td>
<td>Psychological Foundations of Education</td>
<td>3</td>
</tr>
<tr>
<td>TE 930</td>
<td>Teaching Reading and Language Arts in the Elementary School</td>
<td>6</td>
</tr>
<tr>
<td>TE 961</td>
<td>Advanced Student Teaching Seminar (Cr/NC)</td>
<td>1</td>
</tr>
<tr>
<td>TE 966</td>
<td>Advanced Student Teaching in Elementary Schools (Cr/NC)</td>
<td>8</td>
</tr>
<tr>
<td>ED 970</td>
<td>Teaching Event Assessment (Cr/NC)</td>
<td>3</td>
</tr>
<tr>
<td>ETEC 470</td>
<td>Technologies for Teaching</td>
<td>3</td>
</tr>
<tr>
<td>PLC 915A</td>
<td>Teaching and Learning in the Content Area:</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>ELD/SDAIE: Multiple Subjects</td>
<td></td>
</tr>
</tbody>
</table>

Total Units 35

For information on the Blended Integrated Program offered by the Imperial Valley campus, see the Imperial Valley Campus Bulletin.

Multiple Subject Bilingual (BCLAD) Credential (Elementary Education): Bilingual Spanish Emphasis
(Credential Code: 00200)

The Multiple Subject Bilingual Cross-Cultural Language and Academic Development credential (BCLAD) Spanish emphasis is available to students interested in teaching in a bilingual credential elementary school classroom. This credential authorizes the holder to teach in any self-contained bilingual or regular classroom in which one teacher is responsible for all the subjects commonly taught in the elementary schools.

With the passage of Proposition 227, requiring all students in public schools be taught in English unless a school has received a waiver, the Policy Studies Department and the College of Education remains committed to the training of teachers for the BCLAD credentials. The BCLAD 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–BCLAD” in the application for graduation 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 BCLAD multiple subject credential program, a candidate shall have achieved a passing score on the California Subject Examination for Teachers (CSET) that is required for the credential sought. Registration information and materials for the CSET are available at 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.

**Liberal Studies Majors**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC 515 Theories and Practices in Multilingual Education</td>
<td>3</td>
</tr>
<tr>
<td>ED 451 Introduction to Multicultural Education</td>
<td>3</td>
</tr>
<tr>
<td>HHS 280 or TE 296 Health Education for Teachers</td>
<td>1</td>
</tr>
<tr>
<td>SPED 450 Classroom Adaptations for Special Populations</td>
<td>2</td>
</tr>
</tbody>
</table>

**Non Liberal Studies Majors (must take the above and below prerequisites)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>LING 420 Linguistics and English</td>
<td>3</td>
</tr>
<tr>
<td>LING 520 Fundamentals of Linguistics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 210 Number Systems in Elementary Education</td>
<td>3</td>
</tr>
</tbody>
</table>

* Linguistics 420 and 452 are requirements for the Liberal Studies major. Department may waive linguistics course for non-Liberal Studies majors; see Policy Studies adviser.

**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 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 tuberculin 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. Have an interview with the admissions and retention committee of the PLC Department.

9. California Certificate of Clearance. This certificate represents a background 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 California Commission on Teacher Credentialing. Make appointment in EBA-248, telephone 619-594-5155.

11. Language and Culture Examination. All candidates must take and meet the minimum PLC Department Spanish Language Proficiency and Cultural Awareness Examination prior to entering the credential program. Please call 619-594-1160.

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 possesses 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**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC 902 Professional Portfolio (Cr/NC)</td>
<td>1</td>
</tr>
<tr>
<td>PLC 910 Teaching Mathematics to Bilingual Elementary Students</td>
<td>3</td>
</tr>
<tr>
<td>PLC 911 Teaching Social Studies to Bilingual Students</td>
<td>3</td>
</tr>
<tr>
<td>PLC 912 Teaching Science to Bilingual Students</td>
<td>3</td>
</tr>
<tr>
<td>PLC 915A Teaching and Learning in the Content Area: English Language Development/SDAIE: Multiple Subjects</td>
<td>3</td>
</tr>
<tr>
<td>PLC 923 Psychological Foundations of Education and Bilingual Students</td>
<td>3</td>
</tr>
<tr>
<td>PLC 931 Skills in Teaching Reading to Bilingual Elementary Students</td>
<td>3</td>
</tr>
<tr>
<td>PLC 932 Teaching Spanish Language Arts to Bilingual Elementary Students</td>
<td>3</td>
</tr>
<tr>
<td>PLC 960 Student Teaching Seminar for Bilingual Elementary Students (Cr/NC)</td>
<td>6</td>
</tr>
<tr>
<td>PLC 961 Student Teaching for Bilingual Elementary Students (Cr/NC)</td>
<td>8</td>
</tr>
<tr>
<td>PLC 962 Student Teaching for Elementary Bilingual Students II (Cr/NC)</td>
<td>8</td>
</tr>
<tr>
<td>ED 970 Teaching Event Assessment (Cr/NC)</td>
<td>3</td>
</tr>
<tr>
<td>EDTEC 470 Technologies for Teaching</td>
<td>3</td>
</tr>
</tbody>
</table>

**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.

5. Demonstrated knowledge of principles and provisions of United States Constitution through successful completion of three-unit college level course or examination. Courses are listed in General Catalog section on “Graduation Requirements,” IV. American Institutions Requirement.

6. Passage of California Basic Educational Skills Test (CBEST).

7. Passage of Reading Instruction Competence Assessment (RICA) Test.

8. Completion of an approved fifth year program (a minimum of 30 upper division or graduate-level postbaccalaureate units).

9. Demonstrated knowledge of the needs of and methods of providing educational opportunities to individuals with exceptional needs: Special Education 450.

10. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): Educational Technology 470.

11. Knowledge of health education in California, including substance abuse and nutrition: Health and Human Services 280 or Public Health 101 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.

**Bilingual (Spanish) 2042 Multiple Subject and Special Education Credential Program**

(Credential Code: 00200)

The joint Multiple Subject Bilingual Cross Cultural Language and Academic Development credential (BCLAD) (Spanish Emphasis) and Level 1 Special Education Specialist Credential for Mild/Moderate Disabilities is a two-year dual credential program. This program is available to students interested in teaching in bilingual elementary classrooms and special education settings. Upon completion, the BCLAD multiple subject credential authorizes the holder to teach in any self-contained bilingual or regular classroom in which one teacher is responsible for all of the subjects commonly taught in the elementary schools. The specialist credential for mild/moderate disabilities authorizes the holder to teach students with designated disabilities in a variety of school settings.

Candidates who wish to apply to the two-year combined credential program need to specify “Multiple Subject BCLAD/Spanish and Special Education Emphasis” on the application for graduate admission to SDSU. Students can access the electronic application on line at: www.csumentor.edu.

The admissions committee consists of faculty advisers from the Policy Studies and Special Education departments. Advisers from both programs will review and interview perspective candidates. The following materials should be submitted as a complete package directly to the Policy Studies in Language and Cross-Cultural Education Department.

1. Two sets of official transcripts in sealed envelopes from each issuing institution;
2. Complete department application (copy of scores for CBEST/ Spanish Proficiency Examination/CSET or Portfolio, TB test results, letters of recommendation, early field experience, character and identification clearance, and statement of professional goals and philosophy).

Mail or deliver your complete department admissions package to:

Policy Studies in Language and Cross-Cultural Education Department (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.ets.org.

2. **Subject Matter Competency.** Students must verify completion of subject matter competency in diversified subjects commonly taught in self-contained classrooms prior to admission to the Multiple Subject Credential Program. To be admitted to the BCLAD multiple subject credential and Special Education programs, a candidate shall have achieved a passing score on the California Subject Examination for Teachers (CSET) that is required for the credential sought. Registration information and materials for the CSET are available at http://www.cset.ets.org.

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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHS 280 or TE 296 (Health Education for Teachers)</td>
<td>1</td>
</tr>
<tr>
<td>PLC 515</td>
<td>3</td>
</tr>
<tr>
<td>ED 451 or SPED 527</td>
<td>3</td>
</tr>
<tr>
<td>SPED 500</td>
<td>3</td>
</tr>
<tr>
<td>SPED 501 or PLC 923</td>
<td>3</td>
</tr>
<tr>
<td>SPED 502</td>
<td>1</td>
</tr>
<tr>
<td>SPED 524</td>
<td>3</td>
</tr>
</tbody>
</table>

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 tuberculin 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. Turnaround time for the clearance can take as long as eight months. Possessors of K-12 California credentials may satisfy this requirement by submitting copies of those certificates. In lieu of the actual Certificate of Clearance or copy of a credential, candidates may submit their clearance application packets and fees to the Credentials Processing Center, EBA-250.

10. **Credentialed Advising Appointment.** Each applicant must meet with a faculty adviser to plan an appropriate. Make appointment in EBA-248, telephone 619-594-5155.

11. **Language and Culture Examination.** All candidates must take and meet the minimum PLC Department Spanish Language Proficiency and Cultural Awareness Examination prior to entering the credential program. Please call 619-594-1160 to schedule an appointment.

12. **Reading Instruction Competence Assessment (RICA).** California Education Code Section 44283 requires that candidates for the preliminary or clear credential multiple subject pass this RICA requirement. The purpose of this assessment is to ensure that the candidate possess the knowledge and skills important for the provision of effective reading instruction to students. The RICA requirement applies to candidates who did not complete all credential requirements prior to October 1, 1998. Candidates must have passed the RICA in order to be able to file for the credential.

13. **Appeals Process.** Candidates who do not meet all the admission requirements may petition the PLC and SPED Department Admissions and Retention Committee for individual consideration; petition 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**

<table>
<thead>
<tr>
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<tbody>
<tr>
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<td>EDTEC 47B</td>
<td>Technologies for Teaching</td>
</tr>
<tr>
<td>3</td>
<td>PLC 902</td>
<td>Professional Portfolio (Cr/NC)</td>
</tr>
<tr>
<td>3</td>
<td>PLC 910</td>
<td>Teaching Mathematics to Bilingual Students</td>
</tr>
<tr>
<td>3</td>
<td>PLC 911</td>
<td>Teaching Social Studies to Bilingual Students</td>
</tr>
<tr>
<td>3</td>
<td>PLC 912</td>
<td>Teaching Science to Bilingual Students</td>
</tr>
<tr>
<td>3</td>
<td>PLC 915A</td>
<td>Teaching and Learning in the Content Area: English Language Development/SDAIE: Multiple Subjects</td>
</tr>
<tr>
<td>3</td>
<td>PLC 923</td>
<td>Psychological Foundations of Education and Bilingual Students</td>
</tr>
<tr>
<td>3</td>
<td>PLC 931</td>
<td>Skills in Teaching Reading to Bilingual Elementary Students</td>
</tr>
<tr>
<td>3</td>
<td>PLC 932</td>
<td>Teaching Spanish Language Arts to Bilingual Elementary Students</td>
</tr>
<tr>
<td>3</td>
<td>PLC 960</td>
<td>Student Teaching Seminar for Bilingual Elementary Students/First Semester (Cr/NC)</td>
</tr>
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<td>3</td>
<td>PLC 960</td>
<td>Student Teaching Seminar for Bilingual Elementary Students/Second Semester (Cr/NC)</td>
</tr>
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<td>3</td>
<td>PLC 961</td>
<td>Student Teaching for Bilingual Elementary Students (Cr/NC)</td>
</tr>
<tr>
<td>3</td>
<td>PLC 962</td>
<td>Student Teaching for Elementary Bilingual Students II (Cr/NC)</td>
</tr>
<tr>
<td>3</td>
<td>ED 970</td>
<td>Teaching Event Assessment (Cr/NC)</td>
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</table>

**Program: Year Two**

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</thead>
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<td>SPED 470</td>
<td>Special Education Applications (Cr/NC)</td>
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<tr>
<td>1</td>
<td>SPED 505</td>
<td>Educational Services for Students with Serious Emotional Disturbance</td>
</tr>
<tr>
<td>1</td>
<td>SPED 534</td>
<td>Classroom Assessment of Students with Mild/Moderate Disabilities</td>
</tr>
<tr>
<td>3</td>
<td>SPED 553</td>
<td>Behavioral Strategies and Supports for Students with Disabilities</td>
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<tr>
<td>3</td>
<td>SPED 560</td>
<td>Applications of Technology for Individuals with Disabilities</td>
</tr>
<tr>
<td>3</td>
<td>SPED 570</td>
<td>Individualized Special Education Program Plans</td>
</tr>
<tr>
<td>3</td>
<td>SPED 647</td>
<td>Special Education Adaptations of Basic Skills Instruction</td>
</tr>
<tr>
<td>3</td>
<td>SPED 648</td>
<td>Advanced Special Education Adaptations</td>
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<td>1</td>
<td>SPED 662</td>
<td>Communication and Collaboration in Special Education</td>
</tr>
<tr>
<td>1</td>
<td>SPED 970A</td>
<td>Practicum: Students with Disabilities in General and Special Education: Mild/Moderate Disabilities</td>
</tr>
<tr>
<td>10</td>
<td>SPED 980A</td>
<td>Advanced Practicum in Special Education: Mild/Moderate Disabilities (Cr/NC)</td>
</tr>
</tbody>
</table>

**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.
5. Demonstrated knowledge of principles and provisions of United States Constitution through successful completion of three-unit college level course or examination. Courses are listed in General Catalog section on “Graduation Requirements,” IV. American Institutions Requirement.
6. Passage of California Basic Educational Skills Test (CBEST).
7. Passage of Reading Instruction Competence Assessment (RICA) Test.
8. Completion of an approved fifth year program (a minimum of 30 upper division or graduate-level postbaccalaureate units).
9. Demonstrated knowledge of the needs of and methods of providing educational opportunities to individuals with exceptional needs.
10. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): Educational Technology 470 and Special Education 560.
11. Knowledge of health education in California, including substance abuse and nutrition: Health and Human Services 280 or Teacher Education 296 – 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 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, Health and Human Services 280, or Public Health 101, and verification of CPR competency.
7. Demonstrated knowledge of the needs of and methods of providing educational opportunities to individuals with exceptional needs: Special Education 450, “Classroom Adaptations for Exceptionalities.”
8. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): EDTEC 470.

**NOTE:** According to SB 2042 legislation, teachers will be able to earn Professional Clear Credentials upon successful completion of induction programs sponsored by their employers and approved by the California Commission on Teacher Credentialing.

**Admission Standards and Qualifications for the Single Subject Credential Program**

Candidates for the Single Subject Credential Program must satisfy the standards and qualifications listed below and submit complete application packets to the School of Teacher Education, 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](http://www.cset.nesinc.com).
3. **Prerequisite Courses.** These courses or approved equivalents must be completed with grades of C, C+, 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 these factors differentially affect educational outcomes for children. The course assists in preparing teacher applicants to work with students from diverse backgroungs by examining both societal and personal belief systems and the ways that these beliefs are expressed in public school classrooms.
   b. **Health and Human Services 280 or Teacher Education 296, “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 teaching in various settings, 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://edweb.sdsu.edu/site/teach.htm.

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

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE 903</td>
<td>Secondary School Student Teaching Seminar (Cr/NC)</td>
<td>3-4</td>
</tr>
<tr>
<td>TE 914</td>
<td>Teaching and Learning in the Content Area: Major</td>
<td>3</td>
</tr>
<tr>
<td>TE 922</td>
<td>Behavioral and Psychological Aspects of Teaching</td>
<td>3-4</td>
</tr>
<tr>
<td>TE 933</td>
<td>Teaching Reading in the Secondary School</td>
<td>3</td>
</tr>
<tr>
<td>TE 954</td>
<td>Humanistic and Social Aspects of Teaching</td>
<td>3-4</td>
</tr>
<tr>
<td>TE 963</td>
<td>Secondary School Student Teaching I (Cr/NC/RP)</td>
<td>4</td>
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<tr>
<td>TE 964</td>
<td>Secondary School Student Teaching II (Cr/NC/RP)</td>
<td>12</td>
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<td>ED 970</td>
<td>Teaching Event Assessment (Cr/NC)</td>
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<td>ETEC 470</td>
<td>Technologies for Teaching</td>
<td>3</td>
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<tr>
<td>PLC 915B</td>
<td>Teaching and Learning in the Content Area: ELD/SDAE: Single Subject</td>
<td>3</td>
</tr>
</tbody>
</table>

Total 40-43

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:

**Semester 1**

<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>TE 362</td>
<td>Fieldwork in Community Settings</td>
<td>3</td>
</tr>
<tr>
<td>TE 954</td>
<td>Humanistic and Social Aspects of Teaching: Social Foundation</td>
<td>3</td>
</tr>
<tr>
<td>EDTEC 470</td>
<td>Technologies for Teaching</td>
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<td>PLC 915B</td>
<td>Teaching and Learning in the Content Area: ELD/SDAE: Single Subjects</td>
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**Semester 2**

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<td>Secondary School Student Teaching Seminar (Cr/NC)</td>
<td>1</td>
</tr>
<tr>
<td>TE 914</td>
<td>Teaching and Learning in the Content Area: Secondary Methods</td>
<td>3</td>
</tr>
<tr>
<td>TE 922</td>
<td>Behavioral and Psychological Aspects of Teaching: Educational Psychology</td>
<td>3</td>
</tr>
<tr>
<td>TE 933</td>
<td>Teaching of Reading in the Secondary School</td>
<td>3</td>
</tr>
<tr>
<td>TE 963</td>
<td>Secondary School Student Teaching I (Cr/NC/RP)</td>
<td>4</td>
</tr>
</tbody>
</table>

**Semester 3**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE 903</td>
<td>Secondary School Student Teaching Seminar: Methods (Cr/NC)</td>
<td>1-2</td>
</tr>
<tr>
<td>TE 903</td>
<td>Secondary School Student Teaching Seminar: Advanced Student Teaching (Cr/NC)</td>
<td>2</td>
</tr>
<tr>
<td>TE 966</td>
<td>Advanced Student Teaching in Elementary Schools (Cr/NC/RP)</td>
<td>10</td>
</tr>
<tr>
<td>ED 970</td>
<td>Teaching Event Assessment (Cr/NC)</td>
<td>3</td>
</tr>
</tbody>
</table>

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 (BCLAD) Credential (Secondary Education): Bilingual Spanish Emphasis**

(Credential Code: 00100)

The Single Subject Bilingual Cross-Cultural Language and Academic Development (BCLAD) Spanish Emphasis is available for students interested in teaching in a bilingual credential secondary school classroom. This credential authorizes the holder to teach in any self-contained bilingual or regular classroom in which one teacher is responsible for teaching the given subject area.

Candidates who will pursue this credential need to specify “Single Subject Instruction—BCLAD” in the application for graduate admission to SDSU (Code: 00100).

**Standards for Admission**

1. **CBEST.** Students must pass the California Basic Educational Skills Test (CBEST) prior to admission to the Single Subject Bilingual Emphasis credential program. This examination is required by the California Commission on Teacher Credentialing. Booklets containing registration forms and test information are available at 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.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC 515</td>
<td>Theories and Practices in Multilingual Education</td>
<td>3</td>
</tr>
<tr>
<td>ED 451</td>
<td>Introduction to Multicultural Education</td>
<td>3</td>
</tr>
<tr>
<td>HHS 280</td>
<td>Health Education for Teachers</td>
<td>1</td>
</tr>
<tr>
<td>SPED 450</td>
<td>Classroom Adaptations for Special Populations</td>
<td>2</td>
</tr>
</tbody>
</table>

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 take and meet the minimum PLC Department Spanish Language Proficiency and Cultural Awareness Examination prior to entering the credential program. Please call 619-594-1160.

12. Appeals Process. Candidates who do not meet all the admission requirements may petition the PLC Department Admissions and Retention Committee for individual consideration; petition letters must be submitted concurrently with the application packets.

13. Application. Applicants should complete application procedures the semester prior to beginning the credential program. Contact 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

<table>
<thead>
<tr>
<th>Prerequisites</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC 515</td>
<td>Theories and Practices in Multilingual Education</td>
</tr>
<tr>
<td>ED 451</td>
<td>Introduction to Multicultural Education</td>
</tr>
<tr>
<td>HH 280</td>
<td>Subject Matter Competency</td>
</tr>
<tr>
<td>or TE 296</td>
<td>Health Education for Teachers</td>
</tr>
<tr>
<td>SPED 450</td>
<td>Classroom Adaptations for Special Populations</td>
</tr>
<tr>
<td><strong>First Semester</strong></td>
<td></td>
</tr>
<tr>
<td>PLC 400</td>
<td>The Secondary School and Bilingual Education</td>
</tr>
<tr>
<td>PLC 924</td>
<td>Behavioral and Psychological Aspects of Teaching in the Bilingual Classroom</td>
</tr>
<tr>
<td>PLC 933</td>
<td>Skills in Teaching Reading to Bilingual Secondary Students</td>
</tr>
<tr>
<td>PLC 954</td>
<td>Language Development in Bilingual Secondary Classrooms</td>
</tr>
<tr>
<td>PLC 954</td>
<td>Classroom Organization for Democratic Teaching</td>
</tr>
<tr>
<td>PLC 963</td>
<td>Student Teaching for Bilingual Secondary Students I (Cr/NC)</td>
</tr>
<tr>
<td>TE 914</td>
<td>Teaching and Learning in the Content Area: Major</td>
</tr>
<tr>
<td><strong>Second Semester</strong></td>
<td></td>
</tr>
<tr>
<td>PLC 903</td>
<td>Bilingual Secondary Student Teacher Seminar (Cr/NC)</td>
</tr>
<tr>
<td>PLC 915</td>
<td>Teaching and Learning in the Content Area: ELD/SDAIE: Single Subject</td>
</tr>
<tr>
<td>PLC 964</td>
<td>Student Teaching for Bilingual Secondary Students II (Cr/NC)</td>
</tr>
<tr>
<td>ED 970</td>
<td>Teaching Event Assessment (Cr/NC)</td>
</tr>
<tr>
<td>EDTEC 470</td>
<td>Technologies for Teaching</td>
</tr>
</tbody>
</table>

### Preliminary Credential Requirements

1. A bachelor’s degree with one of the approved single subject majors listed in the School of Teacher Education single subject teaching credential catalog section. Credentials can be granted only in the designated single subject credential areas.

2. Completion of an approved program of professional education. (See Department of Policy Studies in Language and Cross-Cultural Education for further information about the approved programs.)

3. Major Adviser’s Recommendation. Passage of subject matter examination(s) or waiver thereof through completion of one of the approved single subject credential majors listed below with a written recommendation from the Ryan major adviser. Demonstrated subject matter competency through completion of approved waiver program in one of the California single subject areas, is through a combination of coursework and competency examinations, or through PRAXIS/SSAT/CSET examinations. Candidates should check with the Policy Studies in Language and Cross-Cultural Education Department (PLC), EBA-248, to clarify the appropriate means for satisfaction of the subject matter competency requirement.

4. Passage of the Spanish Language Proficiency and Cultural Awareness Examination.

5. Demonstrated knowledge of principles and provisions of United States Constitution through successful completion of three-unit college level course or examination. Courses are listed in General Catalog section on “Graduation Requirements,” IV. American Institutions Requirement.

6. Passage of California Basic Educational Skills Test (CBEST).

7. Completion of an approved fifth year program (a minimum of 30 upper division or graduate-level postbaccalaureate units).

8. Demonstrated knowledge of the needs of and methods of providing educational opportunities to individuals with exceptional needs, Special Education 450 and Health and Human Services 280 or Teacher Education 296.

9. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): Educational Technology 470.

10. Knowledge of health education in California, including substance abuse and nutrition, Health and Human Services 280 or Teacher Education 296, 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:

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED 690</td>
</tr>
<tr>
<td>PLC 553</td>
</tr>
<tr>
<td>PLC 600A</td>
</tr>
</tbody>
</table>
**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)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE 530</td>
<td>Children's/Adolescents' Literature</td>
</tr>
<tr>
<td>TE 631</td>
<td>Seminar in Language Arts</td>
</tr>
<tr>
<td>TE 633</td>
<td>Leadership in Literacy Education</td>
</tr>
<tr>
<td>TE 634</td>
<td>Seminar in Research Investigations in Reading and Language Arts</td>
</tr>
<tr>
<td>TE 635</td>
<td>Assessment of Reading and Language Arts</td>
</tr>
<tr>
<td>TE 636</td>
<td>Advanced Assessment of Reading and Language Arts</td>
</tr>
<tr>
<td>TE 637</td>
<td>Instructional Strategies for Reading and Language Arts</td>
</tr>
<tr>
<td>TE 639</td>
<td>Literacy and Language OR</td>
</tr>
<tr>
<td>TE 677</td>
<td>Research Based Pedagogy for Diverse Learners</td>
</tr>
<tr>
<td>TE 640</td>
<td>Planning for Teaching and Assessment in Writing</td>
</tr>
<tr>
<td>TE 736</td>
<td>Field Experience as a Reading Specialist</td>
</tr>
</tbody>
</table>

**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 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 report.

2. Subject Matter Competence. Students must verify completion of subject matter competence for either the multiple subjects credential or for a single subjects credential. For multiple subjects, subject matter competency in diversified subjects commonly taught in self-contained classrooms may be verified through a) completion of the Liberal Studies major, Emphasis in Education or its equivalent at another California teacher-training institution, or b) a passing score on the CSET. Multiple Subjects or Single Subjects Examination.

For single subjects, subject matter competency may be verified through a) completion of coursework for an approved teaching major at SDSU or its equivalent at another California teacher-training institution or b) a passing score on the appropriate PRAXIS/SSAT/CSET examination. Requirements for the various single subject majors are listed with the academic majors in the General Catalog.

Registration information and materials for the PRAXIS/SSAT/CSET are available through the Office of Advising and Recruitment, EBA-259. Test scores submitted for verification of subject matter competency are valid for five years from the date of the examination and must be valid at the time of recommendation for the credential.

For students applying for the Specialist Credential in Early Childhood Special Education, an appropriate major such as Child Development, Developmental Psychology, or Liberal Studies is required.

3. Demonstrated knowledge of the principles and provisions of the United States Constitution through successful completion of a three-unit collegiate-level course or examination. Courses are listed in General Catalog section on “Graduation Requirements.” IV. American Institutions Requirement.

4. Prerequisite Courses.
   a. Special Education 500, 501, 502, and courses applicable to the credential area selected from Special Education 524, 525, and 528.
   b. Special Education 527 (or CLAD/BCLAD credential) and Policy Studies in Language and Cross-Cultural Education 915C.

5. Grade Point Average. Candidates must have a minimum 2.67 overall or 2.75 in the last 60 semester (90 quarter) units attempted. Candidates are required to submit official transcripts from all colleges and universities attended and unofficial SDSU transcripts for GPA calculation.

6. Tuberculin Clearance. Evidence of a negative tuberculosis test (these tests are valid for four years and must be in effect during the time that candidates are enrolled in the credential program). Clearance statements may be secured from Health Services, private physicians or HMOs, or public health agencies.

7. California Certificate of Clearance. This certificate represents a background clearance and check conducted by the State Department of Justice and Federal Bureau of Investigation. Turnaround time for the clearance can take as long as eight months for traditional finger printing. Therefore, applicants are advised to use Livescan. Possessors of K-12 California credentials may satisfy this requirement by submitting copies of those certificates. In lieu of the actual Certificate of Clearance or copy of a credential, candidates may submit their clearance application packets and fees to the Credentials Processing Center, EBA-250.

8. Program Application. Applicants must complete the departmental application form indicating the Specialist Credential program to which they are applying.

9. Letters of Recommendation. Two letters of recommendation from people who know you well (not relatives), especially those who have knowledge of your work with children in school or related settings. These letters must attest to your aptitude and suitability for the teaching profession.

10. Candidate Statement. A candidate statement (500 word maximum) that addresses your background of experiences that have contributed to your desire to be a special education teacher, as well as the personal and professional factors that you consider to be most important if one is to become an effective and caring special educator.

Level I Specialist Credential Programs

1. Core courses: Special Education 505*, 553, 560, 662, 970, 980.

2. Specialization courses:
   a. Mild/Moderate Disabilities: Teacher Education 910A (2 units), 930 (3 units); Special Education 530, 534, 570, 647, 648, 657, 970A, 980A; and 970A (for part-time students).
   b. Moderate/Severe Disabilities: Teacher Education 910A (2 units), 930 (3 units); Special Education 510, 526, 530, 570, 635, 645, 647, 657, 970B, 980B; and 970B (for part-time students).

3. Early Childhood Special Education: Special Education 510, 526, 530, 570, 635, 643A, 643B, 980D (Infant/Toddler), 980D (Preschool); and 970B (for part-time students).

*Not required for Early Childhood Special Education.

Level II Specialist Credential Programs

Requirements for Admission

Candidates for any of the Level II Education Specialist Credentials in Special Education must meet the following requirements:

1. University Standards. Students must satisfy university standards and qualifications for admission to postbaccalaureate standing.

2. Level I Credential. Students must hold or be eligible for a Preliminary Level I Education Specialist Credential or hold a valid out-of-state credential in a special education category comparable to a California Commission-approved Preliminary Level I program authorizing special education service. Level I or out-of-state credentials must be in the area of study for which students are seeking a Level II credential.

3. Employment. Students must be employed as a special education teacher in an early childhood or K-12 setting and submit a Verification of Employment form from the district in which they are employed.

Program

1. Prerequisite: Special Education 975. (1 unit)

2. Core courses: Special Education 605 (1 unit) and 985 (1 unit). (2 units)
3. Specialization courses:
   a. Mild/Moderate Disabilities: Special Education 634, 651, 653. (7 units)
   b. Moderate/Severe Disabilities: Special Education 651, 654. (5 units)
   c. Early Childhood Special Education: Special Education 651, 655. (6 units)


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 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

Prerequisities for admission include a bachelor's degree from an accredited institution in liberal studies, education, social sciences, or the helping profession with a 2.85 grade point average in the last 60 units. Candidates must maintain a 3.0 minimum grade point average in all certificate coursework with no less than a C in any course. Courses taken in the certificate program with a grade of B or better may be applied to a master's degree with the consent of the graduate adviser.

Required courses (12 units):
- SPED 500 Human Exceptionality (3)
- SPED 553 Behavioral Strategies and Supports for Students with Disabilities (3)
- SPED 676 Advanced Applied Behavior Analysis (3)
- SPED 685 Single-Case Research Design (3)
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. 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 646A 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 746 and 747 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. 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.

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, 649, 658, 771, and three units selected with approval of adviser. All courses completed with a grade of B or better are applicable to the Master of Arts degree in Education with a Concentration in Special Education and a Specialization in Gifted. For further information, contact the Department of Special Education.

Distance Education Certificate
(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):
- EDETEC 640 Psychology of Technology-Based Learning (3)
- EDETEC 650 Distance Education (3)
- EDETEC 684 Management of Educational Technology (3)

Electives: (3 units) to be selected from the following with approval of program adviser:
- EDETEC 544 Instructional Design (3)
- EDETEC 670 Exploratory Learning Through Simulation and Games (3)
- EDETEC 671 Learning Environment Design (3)
- EDETEC 685 Informational and Instructional Technologies for Organizations (3)
- EDETEC 700 Seminar in Educational Technology: Best Practices in Distance Education (1)
- EDETEC 700 Seminar in Educational Technology: Cybergogy and Engaged Learning (1)
- EDETEC 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 credential (BCLAD, CLAD, SP) and an educational degree from a regionally accredited institution and hold a current bilingual teaching credential (BCLAD, CLAD, SP).

The certificate program is for matriculated students into the certificate program through the College of Extended Studies. Additional fees are associated with this program. Information can be obtained from the program adviser, Dr. Shulamit N. Ritblatt.

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 courses. 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 Certificate

(Major Code: 99041) (SIMS Code: 330301)

The Early Childhood Special Education Certificate is authorized by the California Commission on Teacher Credentialing. It is designed for individuals who have completed Level II coursework in Mild/Moderate or Moderate/Severe disabilities. Completion of the certificate extends their authorization from birth through 22. Individuals credentialed in other areas such as Deaf and Hard-of-Hearing and Visual Impairments are authorized to serve birth through 22, but may add the certificate for professional growth reasons if desired.

1. Prerequisite: Completion of Level II coursework in one of the Education Specialist credentials and background in early childhood development with focus on infants, toddlers, and preschoolers.


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.
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 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.

**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 (3)
- ARP 687 Placement Practices with Individuals with Disabilities (3)
- ARP 740 Advanced Seminar in Administration, 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 may 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 adolescent 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.
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 743 Fieldwork in Rehabilitation (3) Cr/NC
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

With the approval of the program adviser, 12 units selected from:

ARP 710A Seminar in Rehabilitation (3)
ARP 743 Fieldwork in Rehabilitation (3) Cr/NC
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.

No new students are being admitted to this program.

Contact the Department of Special Education.

Bilingual (Spanish) Special Education Certificate

(Major Code: 90026) (SIMS Code: 330101)

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 workplace 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 student.

**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-791C. Practicum: Evaluation (1-3)
791B: Lecture. 791C: Independent study. Prerequisites: Education 791A and advancement to candidacy for the Master of Arts degree in education. Education 791B and 791C may be taken concurrently.
Supervised experience in conducting a program or product evaluation, strategy selection, procedures, reporting methods, culminating in a written project.

ED 795A-795B. Seminar (3-3)
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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>ED 810</td>
<td>Seminar in Curriculum Development and Implementation</td>
<td>Admission to doctoral program.</td>
<td>Curriculum development and implementation to include culturally diverse contexts with emphasis on reflective implementation and critical analysis of commercial and site-based curriculum.</td>
</tr>
<tr>
<td>ED 814</td>
<td>Seminar in Curriculum Change Processes</td>
<td>Education 810</td>
<td>Process of planning change and elements necessary for implementing and managing curriculum change to include diverse cultural contexts.</td>
</tr>
<tr>
<td>ED 815</td>
<td>Re-Thinking Leadership</td>
<td>Admission to educational leadership doctoral program.</td>
<td>Concepts of individual and group leadership in educational environments. Practices and policies of effective management and leadership; ethical and emerging trends in leadership styles. (Formerly numbered Educational Leadership 810.)</td>
</tr>
<tr>
<td>ED 820</td>
<td>Advanced Educational Statistics</td>
<td>Education 690, Teacher Education 646, or equivalent graduate level course and consent of graduate coordinator.</td>
<td>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.</td>
</tr>
<tr>
<td>ED 822</td>
<td>Seminar in Analysis and Issues in Race and Ethnic Relations</td>
<td>Education 801.</td>
<td>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.</td>
</tr>
<tr>
<td>ED 824</td>
<td>Seminar in Institutional Change in Multicultural Contexts</td>
<td>Education 801.</td>
<td>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.</td>
</tr>
<tr>
<td>ED 827</td>
<td>Seminar in Communication and Cognition in Education</td>
<td>Admission to doctoral program.</td>
<td>Roots of communication in a diverse society. Relationship between cognition and communication including mass media, as well as cross-cultural, and personal modes.</td>
</tr>
<tr>
<td>ED 833</td>
<td>Cognition and Interactive Learning</td>
<td>Education 810.</td>
<td>Role of contemporary interactive media technologies in facilitating learning across varied populations. Interactions of mind and media as they enhance knowledge, perception, and action. Tools and environments for representing and transforming knowledge.</td>
</tr>
<tr>
<td>ED 834</td>
<td>Design and Development of Technology-Based Learning Systems</td>
<td>Education 810.</td>
<td>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.</td>
</tr>
<tr>
<td>ED 836</td>
<td>Research and Writing Support</td>
<td>Admission to educational leadership doctoral program.</td>
<td>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.</td>
</tr>
<tr>
<td>ED 840</td>
<td>Seminar in Leadership in a Diverse Society</td>
<td>Admission to educational leadership doctoral program.</td>
<td>Theories and practices for achieving schools informed by and built around participation of diverse communities and cultures. Intersection of leadership with socio-historical, socio-cultural, and social justice theories. (Formerly numbered Educational Leadership 840.)</td>
</tr>
<tr>
<td>ED 850</td>
<td>Seminar in Quantitative Methods of Inquiry</td>
<td>A master's level course in research methods and admission to doctoral program.</td>
<td>Inquiry and empirical research in educational settings within public schools, postsecondary institutions, and public and private sector educational organizations, culminating in a dissertation proposal.</td>
</tr>
<tr>
<td>ED 851</td>
<td>Seminar in Qualitative Methods of Inquiry</td>
<td>A master's level course in research methods and admission to doctoral program.</td>
<td>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.</td>
</tr>
<tr>
<td>ED 855</td>
<td>Seminar in Leadership for Developing Educational Systems</td>
<td>Admission to educational leadership doctoral program.</td>
<td>Skills and processes to lead the development of educational systems. Development of educational systems into learning organizations through organizational communications, adult learning, and professional development. (Formerly numbered Educational Leadership 850.)</td>
</tr>
<tr>
<td>ED 860</td>
<td>Seminar in Leadership and Educational Change</td>
<td>Admission to educational leadership doctoral program.</td>
<td>Complexities of educational change. Models of organizational change and specific leadership skills and strategies; action plans for educational leadership challenges.</td>
</tr>
<tr>
<td>ED 885</td>
<td>Seminar in Educational Program Planning and Evaluation</td>
<td>Admission to educational leadership doctoral program.</td>
<td>Effective monitoring of and evaluating systems for educational program improvement and policymaking. (Formerly numbered Educational Leadership 885.)</td>
</tr>
<tr>
<td>ED 895</td>
<td>Seminar (1-8)</td>
<td>Admission to the doctoral program or consent of the graduate coordinator.</td>
<td>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.</td>
</tr>
<tr>
<td>ED 899</td>
<td>Doctoral Dissertation (3-15) CR/NC/RP</td>
<td>An officially constituted dissertation committee and advancement to candidacy.</td>
<td>Preparation of the dissertation for the doctoral program. Enrollment is required during the term in which the dissertation is approved.</td>
</tr>
</tbody>
</table>

**CREDENTIAL COURSES**

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>ED 970</td>
<td>Teaching Event Assessment</td>
<td>Admission to teacher education or policy studies in language and cross-cultural education multiple or single subject credential program.</td>
<td>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.</td>
</tr>
<tr>
<td>ED 997</td>
<td>Special Topics in Education (0.5-6)</td>
<td>Consent of instructor.</td>
<td>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.</td>
</tr>
</tbody>
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Administration, Rehabilitation and Postsecondary Education

In the College of Education

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http://interwork.sdsu.edu/arpe/

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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)
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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 605. Postsecondary Education (3)
Philosophy, history, aims, scope, functions, outcomes, principles, and challenges of postsecondary education. Emphasizes teaching, student affairs, and administrative leadership in postsecondary education.

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 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 (5)
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. (Formerly numbered Counseling and School Psychology 615 entitled Seminar in Multicultural Dimensions in Counseling.)

ARP 620. Student Affairs in Higher Education (3)
Historical roots, diversity of institutions and students; philosophical foundations of the field, guiding values, key legal principles and theoretical bases; functional areas within student affairs, their evolution, purpose, professional associations, standards, and current issues.

ARP 621. Theoretical Foundations of Student Affairs (3)
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.

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)
Prerequisite: Consent of instructor.
Counseling theories, approaches to and techniques for counseling, and research concerning counseling effectiveness.

ARP 660. 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 Educational Leadership (2-6) Cr/NC/RP
Prerequisite: Consent of instructor.
Internship for prospective educational leaders. Released time may be required. May be repeated. Maximum credit 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.
Counseling and School Psychology

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Beverly L. Booker, Ph.D., Assistant Professor of Counseling and School Psychology
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Katrina 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 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.

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)

CSP 661. Seminar in Critical Incident and Crisis Interventions (3)
(Offered only in Extension)
Prerequisite: Bachelor’s degree.
Helping skills for managing mental well-being in crisis and critical incident situations; develop practical skills for working in traumatic emergency situations; learn suicide prevention, intervention, and follow-up.

CSP 662. Counseling Interventions with Children and Adolescents (3)
Prerequisites: Counseling and School Psychology 601 and 610C.
Counseling theories, processes and approaches appropriate to children and adolescents in multicultural school and community settings. Application of theories and research for individual, group, family and larger systems interventions.
A. Marriage and Family Therapy
B. School Counseling and School Psychology

CSP 665. Seminar in Traumatized Children and Families (3)
(Offered only in Extension)
Prerequisite: Bachelor’s degree.
Differences between normal and traumatized patterns of grief, traumatizing experiences for children and impact on family. Culturally relevant, research supported interventions, and community resources.

CSP 670. Theory and Process of Group Counseling (3)
Prerequisites: Counseling and School Psychology 600 and 600L.
Group process, theories of group interaction, and group leadership techniques with children, adolescents, adults, couples, and families.
CSP 680. Theory and Process of Consultation (3)
Prerequisites: Counseling and School Psychology 600 and 600L.
Consultation theory, process, and research for counselors and school psychologists. Emphasis on mental health and problem-solving consultation in multicultural education and mental health settings.

CSP 686. Seminar 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 dependence, 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.
Systematic, developmental and systemic frameworks. Treatment goals, issues and strategies derived from family systems therapies. 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 (3)
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 six 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 601.
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.

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.
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
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. Application of assessment methods 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
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
Prerequisite: An officially appointed thesis committee and advancement to candidacy.
Preparation of a thesis for the Master of Science degree in counseling.

CSP 799B. Thesis Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP. Registration required in any semester or term following assignment of RP in Thesis 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

CSP 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program courses.
Registration required of students whose only requirement is completion of the comprehensive examination for the master’s or Ed.S. degree. Registration in 799C limited to two semesters.
Educational Leadership

In the College of Education

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Cynthia L. Uline, Ph.D., Professor of Educational Leadership, Co-Director of Ed.D. in Educational Leadership with Concentration in Pre-K-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 pre-K-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 PreK-12 (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
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 747. Leadership in Diverse PreK-12 Educational Organizations (3)
Prerequisites: Completion of a graduate degree and approval of department.
Current theory and practice in meeting needs of diverse learners. Leadership and administration of preK-12 educational organizations as political, complex systems requiring consensus-building dynamics in a multicultural society.

EDL 755. Governance and Policy Development in PreK-12 Learning Organizations (3)
Prerequisites: Completion of a graduate degree and approval of department.
Development of preK-12 educational policy and impact of politics in governance and administration; control functions of federal, state, and local agencies; influence of lay citizens and special interest groups; roles of judiciary, employee organizations and students.

EDL 760. Practicum in PreK-12 Educational Organizations (2-6) Cr/NC/RP
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.
Educational Technology

In the College of Education

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Faculty
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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. Not open to students with credit in Educational Technology 532.

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.
Policy Studies in Language and Cross-Cultural Education

In the College of Education

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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. Theories and Practices in Multilingual Education (3)
Theoretical, legal, and historical context for multilingual education; policies and practices in bilingual programs; school and community profiles. Fieldwork required. Some sections taught in Spanish.

PLC 553. Language Assessment and Evaluation in Multicultural Settings (3)
Theories and methods of assessment and evaluation of diverse student populations including authentic and traditional models. Procedures for identification, placement, and monitoring of linguistically diverse students. Theories, models, and methods for program evaluation, achievement, and decision making.

PLC 596. Special Topics in Bilingual and Multicultural Education (1-3)
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-bilingual 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 of 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. Theoretical, legal, and historical context for multilingual education; policies and practices in bilingual programs; school and community profiles. Fieldwork required. Some sections taught in Spanish.

PLC 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 Schools (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 B/CLAD 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 924, 954, and concurrent registration in Policy Studies in Language and Cross-Cultural Education 964.
Planning and organizing instruction for Spanish/English bilingual and nonbilingual student teaching assignments. Focus on role of the bilingual teacher and discipline specific methods in English, ESL, mathematics, science, social science, and foreign language. Course taught in Spanish and/or English.

PLC 910. Teaching Mathematics to Bilingual Students (1-3)
Prerequisite: Admission to B/CLAD multiple subject credential program.
Underlying learning theories for teaching mathematical concepts, computation, and problem-solving skills to bilingual students. Taught in Spanish.

PLC 911. Teaching Social Studies to Bilingual Students (1-3)
Prerequisite: Admission to B/CLAD multiple subject credential program.
Conceptual approaches for teaching bilingual social studies curriculum, incorporating sociocultural characteristics of multicultural community, social concepts, and community social issues. Taught in Spanish.

PLC 912. Teaching Science to Bilingual Students (1-3)
Prerequisite: Geology Sciences 412 or Natural Science 412.
Strategies for development of process skills and concept acquisition. Methodology for teaching activity-oriented science class in English and Spanish. Taught in Spanish.

PLC 915. Teaching and Learning in the Content Area: English Language Development/SDAIE (1-3)
Prerequisites: Education 451, Policy Studies in Language and Cross-Cultural Education 515, and admission to B/CLAD or CLAD single subject credential program.
Teaching strategies in content specific fields from second language acquisition perspective taken concurrently with student teaching. See Class Schedule for specific content. May be repeated with new content. (Formerly numbered Policy Studies in Language and Cross-Cultural Education 914.)
A. Multiple Subjects
B. Single Subjects
C. Special Education

PLC 923. Psychological Foundations of Education and Bilingual Students (3)
Prerequisite: Admission to B/CLAD multiple subject credential program.
Major theories of learning and cognition as applied to bilingual students and their relation to child development, first and second language acquisition, and approaches to teaching in bilingual classroom. Taught in Spanish and English.

PLC 924. Behavioral and Psychological Aspects of Teaching in the Bilingual Classroom (1-4)
Prerequisites: Policy Studies in Language and Cross-Cultural Education 400; concurrent registration in Policy Studies in Language and Cross-Cultural Education 954 and 963; admission to the single subject bilingual emphasis program.
Bilingual learning theory as it affects adolescent growth, individualized instruction, classroom management and discipline, and methods of measuring and evaluating achievement. Taught in Spanish and English. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

PLC 931. Skills in Teaching Reading to Bilingual Elementary Students (1-3)
Prerequisite: Admission to B/CLAD multiple subject credential program.
Teaching reading in English, including methods, strategies, assessment, materials, and techniques of transition for implementing reading programs in the bilingual classroom.

PLC 932. Teaching Spanish Language Arts to Bilingual Elementary Students (3)
Prerequisite: Admission to B/CLAD multiple subject credential program.
Assessing language proficiency; selecting, designing, and evaluating learning experiences to develop Spanish and English language arts. Taught in Spanish.

PLC 933. Skills in Teaching Reading to Bilingual Secondary Students (3)
Prerequisites: Upper division standing. Admission to single subject bilingual emphasis program.
Methods 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 B/CLAD single subject credential.
Political, sociocultural, and linguistic aspects of language development in bilingual secondary classrooms. Taught in English and Spanish.

PLC 954. Classroom Organization for Democratic Teaching (1-4)
Prerequisites: Policy Studies in Language and Cross-Cultural Education 400; concurrent registration in Policy Studies in Language and Cross-Cultural Education 924 and 963; admission to the single subject bilingual emphasis program.
Classroom organization and democratic processes of education for secondary classrooms; skills and knowledge for bilingual teachers in maintaining effective environments for student learning in the areas of teaching, discipline, management, and curriculum.

PLC 960. Student Teaching Seminar for Bilingual Elementary Students (1-3) Cr/NC
Prerequisites: Policy Studies in Language and Cross-Cultural Education 923 and admission to B/CLAD multiple subject credential program.
Bilingual instructional practices, classroom management, curricular discipline, micro–teaching in Spanish and English, legal liability, and daily problems encountered in the bilingual classroom. Taught in English and Spanish. Maximum credit six units.
PLC 961. Student Teaching for Bilingual Elementary Students (1-12) Cr/NC
Prerequisites: Admission to B/CLAD multiple subject credential program. Student must provide own transportation to student teaching site.
Field experience at two grade levels in a multicultural setting and a bilingual elementary classroom; student teacher assumes responsibility for planning and instruction for specified time to comply with State requirements. Maximum credit 12 units.

PLC 962. Student Teaching for Elementary Bilingual Students II (1-12) Cr/NC
Prerequisite: Policy Studies in Language and Cross-Cultural Education 961.
Field experience in a multicultural setting or a bilingual elementary classroom. Maximum credit 12 units.

PLC 963. Student Teaching for Bilingual Secondary Students I (3-4) Cr/NC
Prerequisites: Policy Studies in Language and Cross-Cultural Education 400; concurrent registration in Policy Studies in Language and Cross-Cultural Education 924 and 964; admission to the single subject bilingual emphasis program. Students must provide own transportation to student teaching site.
On-site, part-time experience to implement bilingual teacher competencies introduced in Policy Studies in Language and Cross-Cultural Education 515, 924, and 954.

PLC 964. Student Teaching for Bilingual Secondary Students II (9-12) Cr/NC
Prerequisites: Policy Studies in Language and Cross-Cultural Education 924 and 963; concurrent registration in Policy Studies in Language and Cross-Cultural Education 903. Students must provide own transportation to student teaching site.
On-site, full-day experience in State approved bilingual and nonbilingual classes to implement teacher competencies as developed in the total professional sequence. Maximum credit 12 units.
Faculty
Anne W. Graves, Ph.D., Professor of Special Education, Chair of Department
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Courses Acceptable on Master's Degree Programs in Education (SPED)

Courses Acceptable on Master's Degree Programs in Education (SPED)

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 507. School-based Educational Psychology (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.

SPED 508. Educational Services for 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 512. Characteristics and Education of Students with Emotional Disturbance (1)
Prerequisite: Special Education 500. Definition, etiology, assessment, and instructional practices used 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 513. Behavioural 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 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 536. Individualized Special Education Program Plans (1)
Prerequisite: Concurrent registration in Special Education 980. Components of individualized education program plans, individualized family service plans, and individualized transition plans. Goals, objectives, and outcomes for program planning. Legal and ethical considerations.

SPED 596. Selected Topics in Special Education (1-4)
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 teaching credential.
Strategies for adapting curriculum, differentiating instruction, meeting social and behavioral needs. Modifying assessments for students with disabilities and students with gifts and talents in general education classrooms. Applicable to the Teacher Induction Certificate Program. Not acceptable on a master’s degree in special education.

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 649. Curriculum Models for Students Who Are Gifted and Talented (3)
Prerequisite: Credit or concurrent registration in Special Education 647.
Theory, research, and practice in curriculum design and program implementation for developing high potential.

SPED 650. Special Topics in Special Education (1-4)
Prerequisites: Special Education 500, 501.
Instructional sequences (mini-courses) focusing on a single topic or competency dealing with special education. Topics differ each semester to adjust to current curricula 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 (1)
Facilitating transition for individuals with disabilities across activities, instructors, and settings including transition to employment.

SPED 658. Gifted Students from Diverse Backgrounds (3)
Designing programs that consider culture, ethnicity, economic background, language, gender, disability, sexual orientation, and underachievement.

SPED 660. Teaching Students with Physical, Sensory, and Health Impairments (3)
Prerequisite: Level 1 coursework in physical and health impairments (PH1).
Design, development, and delivery of instructional programs and services for students with PH1 including curricular and instructional adaptations. Implementation of adaptive/adaptive technology and augmentative communication. Facilitating participation and access in environments including educational and cultural implications of PH1.
SPED 662. Communication and Collaboration in Special Education (1)
Prerequisites: Admission to credential program and credit or concurrent registration in Special Education 980. Communication and collaboration skills for working with teachers and other professionals, paraprofessionals, parents, and representatives from the community. Listening and questioning techniques, interpersonal processes, family systems and needs, conflict resolution, decision-making models, and team functions.

SPED 676. Advanced Applied Behavior Analysis (3)
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: Special Education 502 and consent of credential adviser. Fifteen hours of observation/participation per week. 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 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.

SPED 971. Internship Practicum: Students with Disabilities in General and Special Education (3-4) Cr/NC
Two hours per unit. Participation in general and special education internship programs for students with disabilities; supervised by a special educator. Integration and application of skills and knowledge gained in credential coursework including classroom organization, management, assessment, instruction, and legal requirements.

SPED 975. Professional Development Planning in Special Education (1) Cr/NC
Prerequisite: Completion of Level I credential in special education. Planning for professional development including demonstration of implementation of policies and practices appropriate for providing services to students with disabilities.

SPED 980. Advanced Practicum in Special Education (1-12) Cr/NC
Prerequisite: Consent of credential adviser. Culminating practicum for Education Specialist Credential (Level 1). Participation supervised by a special educator. May be repeated in other specialties.
A. Mild/Moderate Disabilities
B. Moderate/Severe Disabilities
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.
Teacher Education
In the College of Education

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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
Kathleen F. Mikita-Gomez, Ph.D., Professor of Teacher Education
Barbara Moss, Ph.D., Professor of Teacher Education
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Cathy Zozakiewicz, Ph.D., Associate Professor of Teacher Education
Christianna Alger, Ph.D., Assistant 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 Gradu-
ate 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 under-
standing. 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 applica-
table 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 prelimi-
nary credential work and ongoing professional development.
Applicable to the Teacher Induction Certificate Program. Not
acceptable on a master's degree.

TE 602B. Seminar: Assessing Professional Development
Plan (1) Cr/NC
Prerequisites: Preliminary multiple or single subject credential and
Teacher Education 602A.
Role of advanced study in induction coursework on professional
development. Future professional development needs and plans
outlined. Applicable to the Teacher Induction Certificate Program. Not
acceptable on a master's degree.

TE 604. Advanced Problems in Instruction (3)
Prerequisites: Teaching experience and consent of instructor.
Scientific research and philosophical principles which underlie
school instruction.

TE 605. Innovations in Instruction (1-3)
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 726.
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.
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 660 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.
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 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.
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 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 chair and instructor.

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 632 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.

CREDENTIAL 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.
**Teacher Education**

**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 954.
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 961.
Teaching experiences including all the instructional activities for which a teacher in a classroom is normally responsible.

**Electrical and Computer Engineering**
Refer to “Engineering” in this section of the bulletin.

**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.
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 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.
Engineering
In the College of Engineering

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Associateships
Graduate teaching associateships and graduate assistantships in engineering are available to a limited number of qualified students. Application forms and additional information may be secured from the chair of the appropriate department.

General Information
The College of Engineering offers graduate study leading to the Ph.D. degree in engineering science/applied mechanics and Master of Science degrees in bioengineering, aerospace, civil, electrical, and mechanical engineering. The Ph.D. degree program is offered jointly with the University of California, San Diego. These curricula are designed to augment the student’s undergraduate training by advanced study in one of the various fields of engineering. Recognizing the increasing importance in modern technology of the engineer-scientist team, San Diego State University has developed an academic program which offers to individuals holding a first degree in engineering, an opportunity to pursue advanced study in a specialized area of knowledge. 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) TOEFL score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).

College of Engineering
The following materials should be mailed or delivered to the appropriate address listed in each department section:

(1) Personal statement of graduate program goals;

(2) Letters of recommendation (optional).

Advancement to Candidacy
All students must meet the general requirements for advancement to candidacy as described in Part 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:

1. Twenty-one units of 600-700 numbered courses in aerospace engineering and/or engineering mechanics. At least six units must be taken in the Aerospace Engineering or Engineering Mechanics specialization. At least one course must be taken outside the student's area of specialization.
2. Nine additional units of 500-, 600- and 700-numbered courses approved by the graduate adviser.

Areas of Specialization in Aerospace Engineering and Engineering Mechanics

1. Aerodynamics/Astronautics
   (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 711 Structural Acoustics (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
(1) Personal statement of graduate program goals;
   (2) Letters of recommendation (optional).

Specific requirements for the degree: The student’s program will be prepared in conference with and approved by the bioengineering graduate adviser. Students take a “core” of courses required for their specialization, and additional courses and electives as listed below. Students without prerequisites for the required courses may need to take additional courses outside the 30 units needed for the degree. The student’s program of study must satisfy the following requirements:

1. Students select a specialization in biomechanics, biomaterials, or bioinstrumentation in consultation with the bioengineering graduate adviser.
2. A total of 30 units, consisting of five required 500-, 600-, and 700-level core courses (15-16 units) corresponding to the specialization, 6-9 units of Research (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.
3. A thesis project is required.
4. Demonstration of prior coursework equivalent to a core course will enable substitution of an elective chosen in consultation with the bioengineering graduate adviser.
5. At least 15 units of coursework (excluding 797, 798, 799 courses) must be from Engineering.
6. At least 12 units of coursework (excluding 797, 798, 799 courses) must be 600- or 700-level courses.

Core Courses:

### Biomechanics
   (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/ E E 685 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/ E E 685 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/ E E 685 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)
- E N S 610 Biomechanics: Measurement Techniques I-Kinematics (3)
- E N S 611 Biomechanics: Measurement Techniques II-Kinetics (3)
- E N S 612 Biomechanics: Measurement Techniques III-EMG (3)
- E N S 613 Motor Control and Rehabilitation Science (3)
- E N V 554 Process Fundamentals of Environmental Systems (3)
- E N V 648 Biological Processes and Bioremediation Engineering (3)
- M E 502 Continuum Mechanics (3)
- M E 540 Nonmetallic Materials (3)
- M E 580 Biomaterials (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)
- P H Y S 670A Medical Physics I (3)
- P H Y S 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: 442066)
CIV E 632 Computational Hydraulics and Hydrology (3)
CIV E 633 Environmental Hydrology (3)
CIV E 634 Surface Water Hydrology (3)
CIV E 638 Sedimentation and River Engineering (3)

Concentration in Environmental Engineering
(Major Code: 09221) (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)
Engineering

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 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). 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 breadth 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.

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 the 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 from mechanical engineering.

Available opportunities for thesis research and special study projects include heat transfer, thermodynamics, fluid mechanics, mechanics of materials, vibration, controls, CAD/CAM and robotics, materials optimization and bioengineering.

The following materials should be mailed or delivered to:

Dr. Khaled Morsi, Graduate Adviser
Department of Mechanical Engineering
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1323

1. Personal statement of graduate program goals;
2. Letters of recommendation (optional).

Specific requirements for the degree: The student's program, prepared in conference with and approved by the graduate adviser, must satisfy the following requirements:

1. Twenty-one units of 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 542 Manufacturing with Nonmetallic Materials (3)
M E 543 Powder-Based Manufacturing (3)
M E 555 Thermal Systems Analysis and Design (3)
M E 556 Biomechanics (3)
M E 557 Fundamentals of Micro-Electro-Mechanical Systems (MEMS) (3)
M E 596 Advanced Mechanical Engineering Topics (related to Design and Manufacturing) (3)
Engineering

ME 610 Finite Element Methods in Mechanical Engineering (3)
ME 621 Mechanical Vibrations (3)
ME 645 Mechanical Behavior of Engineering Materials (3)
ME 646 Mechanics of Sintering (3)
ME 683 Design of Medical Devices (3)
ME 685 Micro-Electro-Mechanical Systems (MEMS) Design and Applications (3)
ME 696 Advanced Topics in Mechanical Engineering (related to Design and Manufacturing) (3)
EM 621 Theory of Elasticity (3)
EM 641 Structural Optimization (3)

Group B: Dynamics and Control
ME 620 Introduction to Mechanical Vibrations (3)
ME 530 Automatic Control Systems (3)
ME 596 Advanced Mechanical Engineering Topics (related to Dynamics and Control) (3)
ME 621 Mechanical Vibrations (3)
ME 632 Advanced Topics in Automatic Controls (3)
ME 696 Advanced Topics in Mechanical Engineering (related to Dynamics and Control) (3)

Group C: Energy and Thermofluids
ME 555 Thermal Systems Analysis and Design (3)
ME 556 Solar Energy Conversion (3)
ME 596 Advanced Mechanical Engineering Topics (related to Energy and Thermofluids) (3)
ME 651 Advanced Thermodynamics (3)
ME 653 Combustion (3)
ME 656 Conduction Heat and Transfer (3)
ME 657 Convection Heat Transfer (3)
ME 658 Radiation Heat Transfer (3)
ME 661 Gas Dynamics (3)
ME 696 Advanced Topics in Mechanical Engineering (related to Energy and Thermofluids) (3)
AE 601 Computational Fluid Mechanics (3)
AE 612 Compressible Fluid Flow (3)
AE 644 Turbulent Flow (3)

Group D: Materials and Mechanics
ME 502 Continuum Mechanics (3)
ME 520 Introduction to Mechanical Vibrations (3)
ME 540 Nonmetallic Materials (3)
ME 542 Manufacturing with Nonmetallic Materials (3)
ME 543 Powder-Based Manufacturing (3)
ME 580 Biomechanics (3)
ME 596 Advanced Mechanical Engineering Topics (related to Materials and Mechanics) (3)
ME 610 Finite Element Methods in Mechanical Engineering (3)
ME 621 Mechanical Vibrations (3)
ME 645 Mechanical Behavior of Engineering Materials (3)
ME 646 Mechanics of Sintering (3)
ME 681 Biomaterials (3)
ME 696 Advanced Topics in Mechanical Engineering (related to Materials and Mechanics) (3)
EM 621 Theory of Elasticity (3)
EM 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 advisor 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. Lai 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.

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 associations 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) TOEFL score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).
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/applied mechanics, bioengineering, electrical and computer engineering, and 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.

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, Electrical and Computer Engineering: M. Gupta, I. Harris, S. Kumar, S. Nagaraj, M. Sarkar, S. Sharma.


University of California, San Diego:

Program Director: Enrique Luce


Committee Members, Structural Engineering: S. Ashford, T. Hutchinson, J. Kosmatka, Q. Zhu.
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 796. Special Study (1-6) Cr/NC
Prerequisites: Graduate standing and consent of Associate Dean of College of Engineering.
Individual study. Maximum credit six units applicable to Master of Engineering degree.

ENGR 799A. Project (3) Cr/NC/RP
Prerequisites: An officially appointed project committee and advancement to candidacy.
Preparation of a project for the master’s degree.

ENGR 799B. Project Extension (0) Cr/NC
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.
Aerospace Engineering and Engineering Mechanics

In the College of Engineering

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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., Assistant Professor of Aerospace Engineering and Engineering Mechanics
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.

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)
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 711. Structural Acoustics (3)
Prerequisites: Engineering 510 and Engineering Mechanics 611.
Acoustic radiation from different sources. Vibration of and acoustic radiation from beams, plates, and other solids. Effect of fluid loading.
E M 727. Theory of Elastic Stability (3)
Prerequisite: Engineering Mechanics 621.
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.
Civil, Construction, and Environmental Engineering

In the College of Engineering

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Faculty

Janusz C. Supernak, Ph.D., Professor of Civil, Construction, and Environmental Engineering, 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

Kenneth D. Walsh, Ph.D., P.E., Professor of Civil, Construction, and Environmental Engineering, The AGC Paul S. Roel Chair in Construction Engineering and Management

Bruce D. Westermo, Ph.D., Professor of Civil, Construction, and Environmental Engineering

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 Ararsso, 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)  

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.)

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)
Prerequisite: Civil Engineering 444.
Principles of open channel flow; analysis and problems of critical, uniform, gradually-varied, and rapidly-varied flows, design and environmental problems; computer simulations and applications; and culvert hydraulics.

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)
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.

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 421 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 techniques; 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.

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 632. Computational Hydraulics and Hydrology (3)
Prerequisites: Civil Engineering 445 and 530.

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 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.

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.

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 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.

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.

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.
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
Andrew Y.J. Szeto, Ph.D., P.E., Professor of Electrical and Computer Engineering
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Sunil Kumar, Ph.D., Associate Professor of Electrical and Computer Engineering
Santosh V. Nagaraj, Ph.D., Associate Professor of Electrical and Computer Engineering
Yauf Oztrak, Ph.D., Associate Professor of Electrical and Computer Engineering
Arif Ege Engin, Ph.D., Assistant Professor of Electrical and Computer Engineering
Shabani Ashrafizi, Ph.D., Assistant Professor of Electrical and Computer Engineering
Mahasweta Sarkar, Ph.D., Assistant Professor of Electrical and Computer Engineering
Satish Kumar Sharma, Ph.D., Assistant Professor of Electrical and Computer Engineering
Adjunct Faculty
Khurram Waheed, Ph.D., Electrical and Computer Engineering

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 communications 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 320.
Recent developments in electronic assistive devices and microcomputers 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.
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 or Physics 516.  
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 course can be taken as 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 561.  
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.  

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 of 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. Modern 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 T1 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, topography 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 resilience, quality of service, cellular video telephony, multimedia CoS-awareWLAN, 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 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.

(Same course as Mechanical Engineering 685)
Prerequisite: Mechanical Engineering 556.
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 systems. May be repeated with new content and consent of graduate adviser. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

E E 730. Advanced Topics in Electronics (1-3)
Prerequisites: Graduate level coursework in the area and consent of instructor.
Selected topics in microelectronics, electronic instrumentation, and integrated circuit design. May be repeated with new content and consent of graduate adviser. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

E E 740. Advanced Topics in Physical Electronics (1-3)
Prerequisites: Graduate level coursework in the area and consent of instructor.
Selected topics in electromagnetic fields and waves, optoelectronics, and semiconductor devices. May be repeated with new content and consent of graduate adviser. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.
**E E 750. Advanced Topics in Communications (1-3)**
Prerequisites: Graduate level coursework in the area and consent of instructor.
Selected topics in communication theory, wireless and wireline systems, and telecommunications engineering. May be repeated with new content and consent of graduate adviser. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

**E E 770. Advanced Topics in Computer Engineering (1-3)**
Prerequisites: Graduate level coursework in the area and consent of instructor.
Selected topics in computer and digital system engineering. May be repeated with new content and consent of graduate adviser. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

**E E 795. Internship/Practicum (1) Cr/NC**
Prerequisites: Eighteen units of graduate level coursework in electrical engineering and consent of adviser.
Supervised internship or practicum experience with approval of graduate adviser. Not applicable to an advanced degree. Maximum credit three units.

**E E 797. Research (1-6) Cr/NC/RP**
Prerequisites: Consent of department chair. Open only to students in Plan A Thesis.
Research in engineering. Maximum credit six units applicable to a master’s degree for students in Plan A only.

**E E 798. Special Study (1-3) Cr/NC/RP**
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.
Mechanical Engineering

In the College of Engineering

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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)
Khaled B. Morsi, Ph.D., Professor of Mechanical Engineering (Graduate Adviser)
Eugene A. Olevsky, Ph.D., Distinguished Professor of Mechanical Engineering and Director of Doctoral Programs in the College of Engineering
Ashaw Beyene, Ph.D., Associate Professor of Mechanical Engineering
Kee S. Moon, Ph.D., Associate Professor of Mechanical Engineering
Samuel K. Kassegne, Ph.D., Assistant 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 390, 450, 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.

M E 542. Manufacturing with Nonmetallic Materials (3)
Prerequisites: Mechanical Engineering 340 and Engineering 280 with a grade of C or better.
Engineering polymers and composites, processes, and manufacturing techniques. Polymer flow in extrusion, compression molding, RTM, and calendaring. Hands-on fabrication and test exercises included along with a capstone manufacturing project.

M E 543. Powder-Based Manufacturing (3)
Prerequisite: Mechanical Engineering 340.
Manufacturing of micro and nano-structured engineering components and composites starting with metal and/or ceramic powders. Powder production methods, characterization, powder shaping and compaction, sintering, hot consolidation, design considerations, and finishing operations.

M E 546. Computer Aided Manufacturing (3)
Prerequisites: Mechanical Engineering 102, 314, 340; and Engineering 280 with a grade of C or better.
Computer controlled manufacturing and assembly techniques and devices. Databases and special languages. Agile manufacturing soft ware programs and technologies.

M E 552. Heating, Ventilating, and Air-Conditioning (3)
Prerequisites: Mechanical Engineering 351 and 452.
Application of engineering methodologies for quantitative understanding 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 555. 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.


One lecture and four hours of laboratory.
Micromanufacturing 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 pre
requisite 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 sampled data systems. State space
analysis of multivariable systems, optimal control systems.
M E 645. Mechanical Behavior of Engineering Materials (3)
Prerequisites: Mechanical Engineering 314, 340, and 350.
Elastic and plastic deformation of monolithic engineering materials
and composites. Dislocation theory and plasticity of crystalline solids.
Linear elastic and elastic-plastic fracture mechanics. Failure analysis
of engineering components. Design optimization based on materials
and service environment variables.
M E 646. Mechanics of Sintering (3)
Prerequisites: Mechanical Engineering 340 and 514.
Practical aspects and conceptual models and mechanisms
associated with sintering of ceramic and metal powders.
M E 651. Advanced Thermodynamics (3)
Prerequisites: Engineering 280 with a grade of C or better and
Mechanical Engineering 351.
Advanced concepts of macroscopic thermodynamics are
developed including entropy generation, irreversibility, effectiveness,
exergy, and chemical exergy of fuels. Concepts applied to power and
refigeration 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 661. Biomaterials (3)
Prerequisites: Mechanical Engineering 240 and 580.
Structure and properties of metallic, ceramic, and polymer biomate-
rials. 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 663. 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
Prerequisite: 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 appli-
cable 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.
In the Department of English and Comparative Literature
In the College of Arts and Letters

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Sandrine A. Alcossard, M.F.A., Professor of English (M.F.A. Program Graduate Adviser)
Alida L. Allison, Ph.D., Professor of English and Comparative Literature
Laurel Amtower, Ph.D., Professor of English and Comparative Literature
Gerald J. Butler, Ph.D., Professor of English, Emeritus
Laurie Champion, Ph.D., Professor of English
Marilyn Chin, M.F.A., Professor of English and Comparative Literature
Laurie D. Edson, Ph.D., Professor of English and Comparative Literature
Gerald H. Fauber, 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 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., Associate 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
Jeanette Shumaker, Ph.D., Professor of English
Clare Colquitt, Ph.D., Associate Professor of English, Director of Graduate Studies, M.A. Program
June Cummmins-Lewis, Ph.D., Associate Professor of English
Ilya V. Kaminsk, J.D., Associate Professor of English and Comparative Literature (M.F.A. Program Graduate Adviser)
Barry G. Stampfl, Ph.D., Associate Professor of English
Quentin J. Bailey, Ph.D., Assistant Professor of English and Comparative Literature
Michael K. Borgstrom, Ph.D., Assistant Professor of English
Phillip Serrato, Ph.D., Assistant Professor of English and Comparative Literature
Joseph T. Thomas, Jr., Ph.D., Assistant Professor of English

Associateships and Scholarships

Graduate teaching associateships and graduate assistantships are available to a limited number of qualified students. Teaching associates teaching English 100 and 200 must have completed Rhetoric and Writing Studies 609, attend Rhetoric and Writing Studies 796A during the first semester of their associateship, and have the consent of the RWS GTA program director. Applications and additional information are available from the graduate director and from the department office.

General Information

The Department of English and Comparative Literature offers graduate study leading to a Master of Arts in English and the Master of Fine Arts in creative writing. The M.A. student can choose one of five areas of specialization: American literature, British literature, children’s literature, comparative literature, or rhetoric and writing. The M.A. is a 30-unit degree program particularly well-suited for students who anticipate further graduate work in a literature or rhetoric Ph.D. program or who intend to teach English in a community college or, after obtaining a credential, in a secondary school. The M.F.A. in creative writing is a 54-unit program which offers study in poetry or fiction with a balance between studio and academic, traditional and experimental, commercial and aesthetic approaches. The program has two stages – graduate seminars followed by intensive study with one or more professors in tutorials and thesis preparation. The M.F.A. is a professional program intended for full-time students who wish to receive a terminal degree in creative writing. Each year, in addition to the resident faculty, the department invites approximately twenty writers and editors to the campus for readings and residencies.

The department offers a wide range of courses and approaches to the study of literature and writing, many of which are outlined in English 600. Introduction to Graduate Study, required of all entering M.A. students. Faculty publications in literature and rhetoric are similarly diverse. They include major literary biographies, historical studies, critical analysis from various current perspectives, reviews of and interviews with contemporary writers, as well as a broad spectrum of original poetry and fiction. The department also sponsors the literary periodicals Fiction International, Poetry International, and The Pacific Review.

Admission to Graduate Study

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

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

Graduate Admissions

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

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

(1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;
Note:
• Students who attended SDSU need only submit transcripts for work completed since last attendance;
• Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.
Master of Arts Degree in English

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

Department of English and Comparative Literature
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-8140

(1) Three letters of recommendation (in sealed and signed envelopes) from persons in a position to judge academic ability;
(2) A 750-1000 word statement of purpose;
(3) A 10-page writing sample from a previous literature course, preferably an analytical essay involving research.

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

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

Master of Fine Arts Degree in Creative Writing

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

Department of English and Comparative Literature
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-8140

(1) A sample of creative work (15 poems or 30 pages of prose) to enable the creative writing faculty to assess the candidate's suitability to pursue an M.F.A. in creative writing;
(2) A 750-1000 word statement of purpose;
(3) Three letters of recommendation.

Master of Arts Degree in English

Admission to the Degree Curriculum

Students will be admitted in both the fall and spring semesters. Submit applications by October 1 for the spring and by February 1 for the fall.

All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. Students may be admitted to the master's program in English in one of two categories:

1. Classified Graduate Standing

   To be considered for admission, students must meet the following minimal requirements:
   a. 24 units of upper division work in English. (Students choosing the comparative literature specialization may substitute foreign language literature or comparative literature courses.)
   b. 2.85 overall on a 4.0 Grade Point Scale.
   c. 3.0 grade point average in the English major. (Students choosing the comparative literature specialization must possess a 3.0 grade point average in either foreign language literature or comparative literature courses.)
   d. The applicant normally must achieve a minimum score of 550 on the verbal section of the Graduate Record Examination, and a minimum of 5.0 on the GRE analytical essay examination.

2. Conditional Classified Graduate Standing

   a. Conditional acceptance may be granted if there is a deficiency in any of the above requirements. A student accepted conditionally must customarily achieve an average of 3.25 in nine units of English or comparative literature courses with no grade less than B– before proceeding to further study and is limited to 12 units. Any units taken above this quota will not count toward the 30 units for the master's degree in English.
   b. English major unit deficiencies. Students who lack 24 units of credit in upper division courses in English or in foreign language literature or comparative literature courses will be considered for conditional standing if they meet the requirements of 2.85 overall and achieve a minimum score of 550 on the verbal section of the Graduate Record Examination and a minimum of 3.0 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 (written examination). Students specializing in rhetoric and writing may only select the thesis option (Plan A).

Specialization in American Literature

(Major Code: 15011) (SIMS Code: 112103)

Core Courses (9 units):
ENGL 600 Introduction to Graduate Study (3)
ENGL 601 Literary Study in a Multicultural World (3)
ENGL 602 Literary Theory and Critical Practice (3)

American Literature Research Focus. With prior approval by the graduate adviser, a student will select nine units from the following:
ENGL 604A Seminar: American Literary Period or Movement: American Literature (3)
ENGL 606A Seminar: American Literary Type: American Literature (3)
ENGL 625 Literature of the United States (3)
ENGL 700 Seminar: A Major Author or Authors (3)
ENGL 725 Seminar: Issues in Literature of the United States (3)

(With the consent of the graduate adviser, English 798, with appropriate content, may be substituted for one of the above courses.)
Electives: Diversification in Literary and Writing Research. With the approval of the graduate adviser, nine units selected from other English and comparative literature departmental graduate offerings. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

Culminating Experience:
Plan A: (Thesis or Project) – 799A (3 units)
Plan B: (Comprehensive Examination) – Additional 3 units of 700-level coursework in English.

Specialization in British Literature
(Major Code: 15011) (SIMS Code: 112104)

Core Courses (9 units):
- ENGL 600 Introduction to Graduate Study (3)
- ENGL 601 Literary Study in a Multicultural World (3)
- ENGL 602 Literary Theory and Critical Practice (3)

British Literature Research Focus. With prior approval by the graduate adviser, a student will select nine units from the following:
- ENGL 604B Seminar: British Literary Period or Movement (3)
- ENGL 606B Seminar: British Literary Type (3)
- ENGL 624 British Literature (3)
- ENGL 700 Seminar: A Major Author or Authors (3)
- ENGL 724 Seminar: Issues in British Literature (3)
(With the consent of the graduate adviser, English 798, with appropriate content, may be substituted for one of the above courses.)

Electives: Diversification in Literary and Writing Research. With the approval of the graduate adviser, nine units selected from other English and comparative literature departmental graduate offerings. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

Culminating Experience:
Plan A: (Thesis or Project) – 799A (3 units)
Plan B: (Comprehensive Examination) – Additional 3 units of 700-level coursework in English.

Specialization in Children’s Literature
(Major Code: 15011) (SIMS Code: 112107)

Core Courses (9 units):
- ENGL 600 Introduction to Graduate Study (3)
- ENGL 601 Literary Study in a Multicultural World (3)
- ENGL 602 Literary Theory and Critical Practice (3)

Children’s Literature Research Focus. With prior approval by the graduate adviser, a student will select nine units from the following:
- ENGL 604D Seminar: Children’s Literature Literary Period or Movement (3)
- ENGL 606D Seminar: Children’s Literature Literary Type (3)
- ENGL 627 History of Children’s Literature (3)
- ENGL 700 Seminar: A Major Author or Authors (3)
- ENGL 727 Seminar: Issues in Children’s Literature (3)
(With the consent of the graduate adviser, English 798, with appropriate content, may be substituted for one of the above courses.)

Electives: Diversification in Literary and Writing Research. With the approval of the graduate adviser, nine units selected from other English and comparative literature departmental graduate offerings. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

Culminating Experience:
Plan A: (Thesis or Project) – 799A (3 units)
Plan B: (Comprehensive Examination) – Additional 3 units of 700-level coursework in English.

Specialization in Comparative Literature
(Major Code: 15011) (SIMS Code: 112115)

Core Courses (9 units):
- ENGL 600 Introduction to Graduate Study (3)
- ENGL 601 Literary Study in a Multicultural World (3)
- ENGL 602 Literary Theory and Critical Practice (3)

Comparative Literature Research Focus. With prior approval by the graduate adviser, a student will select nine units from the following:
- ENGL 604C Seminar: Comparative Literature Literary Period or Movement (3)
- ENGL 606C Seminar: Comparative Literature Literary Type (3)
- ENGL 626 Comparative Literature (3)
- ENGL 700 Seminar: A Major Author or Authors (3)
- ENGL 726 Seminar: Issues in Comparative Literature (3)
(With the consent of the graduate adviser, English 798, with appropriate content, may be substituted for one of the above courses.)

Electives: Diversification in Literary and Writing Research. With the approval of the graduate adviser, nine units selected from other English and comparative literature departmental graduate offerings. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

Culminating Experience:
Plan A: (Thesis or Project) – 799A (3 units)
Plan B: (Comprehensive Examination) – Additional 3 units of 700-level coursework in English.

Specialization in Rhetoric and Writing
(Major Code: 15011) (SIMS Code: 112160)

Core Courses (9 units):
- ENGL 600 Introduction to Graduate Study (3)
- ENGL 601 Literary Study in a Multicultural World (3)
- ENGL 602 Literary Theory and Critical Practice (3)

Rhetoric and Writing Research Focus. With prior approval by the graduate adviser, a student will select nine units from the following:
- RWS 600 Reading and Writing Rhetorically (3)
- RWS 601A History of Rhetoric I (3)
- RWS 602 Modern Rhetoric and Composition Studies (3)
- RWS 640 Research Methods in Rhetoric and Writing Studies (3)

Electives: Diversification in Literary and Writing Research. With the approval of the graduate adviser, nine units selected from other English and comparative literature departmental graduate offerings. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

Culminating Experience:
Plan A: (Thesis or Project) – 799A (3 units)

Master of Fine Arts Degree
in Creative Writing

Admission to the Degree Curriculum

STUDENTS WILL BE ADMITTED TO THE M.F.A. IN CREATIVE WRITING ONLY IN THE FALL SEMESTER AND COMPLETE APPLICATIONS MUST BE RECEIVED NO LATER THAN FEBRUARY 1.

In addition to meeting the general requirements for admission to San Diego State University with classified graduate standing, as described in Part Two of this bulletin, a student must satisfy the following requirements before being recommended for classified graduate standing.

The applicant must possess a baccalaureate degree in creative writing, or in English with a focus in creative writing, or an approved affiliated field, with a grade point average of not less than 3.0 overall in the last 60 units of study attempted, with a 3.25 undergraduate grade point average in the major, and a 3.5 average in those courses considered prerequisite for the M.F.A. focus the student elects.

If deficient, the applicant must complete undergraduate requirements commensurate with the proposed focus in the M.F.A. program.

The applicant normally must achieve a minimum score of 1050 on the Graduate Record Examination, with a minimum of 550 on the verbal section.
Students who submit especially compelling samples of creative work, but who have not met certain criteria or who demonstrate deficiencies in undergraduate preparation or basic skill development may be granted conditional classified admission to the program. The graduate coordinator shall specify the conditions for such admission with the proviso that any prerequisite coursework assigned must be completed with a minimum grade point average of 3.0 and no grade less than a B-.

A student holding an M.A. degree in English with a specialization in creative writing from San Diego State University, or any other acceptable accredited institution of higher learning, must formally apply for admission to the M.F.A. program. Applicants holding an M.A. or pursuing an M.F.A. at an acceptable accredited institution may transfer up to 18 units upon review and recommendation by the creative writing faculty in the area of focus and the approval of the dean of the Division of Graduate Affairs. Students unable to satisfy the requirements for the M.F.A. degree will not automatically be considered for an M.A. degree.

Students already accepted into the M.F.A. program at San Diego State University who request a change of focus (poetry or fiction) at a later date will be required to reapply to the creative writing committee.

**Advancement to Candidacy**

All students must meet the general requirements for advancement to candidacy as described in Part 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-.

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.


   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)**

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)**

Works centrally concerned with an adolescent protagonist. Includes both traditional novels of development (Bildungsroman) and contemporary young adult novels.

**ENGL 503. Topics in Children's Literature (3)**

Topics in children’s and adolescents’ literatures such as regionalism, multiculturalism, fantasy, science fiction, non-fiction, illustrated books, nineteenth-century classics, major works by twentieth-century authors, British children’s literature, the noir young adult novel, and the history of genre. Maximum credit six units.
ENGL 508W. The Writing of Criticism (3)
Prerequisites: Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units; completed Writing Placement Assessment with a score of 8 or higher (or earned a C or higher in RWS 250, 251, or LING 251 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)
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)
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)
Representative works by American writers from the colonial period through the Revolution; to include works by Anne Bradstreet, Phillis Wheatley, Olaudah Equiano, Cotton Mather, Jonathan Edwards, Benjamin Franklin, Thomas Jefferson, various Native American speakers and writers, and others.

ENGL 522. Literature of the United States, 1800-1860 (3)
Representative works by United States writers from 1800 to 1860; likely to include works by Emerson, Hawthorne, Melville, Poe, Stowe, Thoreau, Whitman, and others.

ENGL 523. Literature of the United States, 1860-1920 (3)
Representative works by United States writers from 1860 to 1920; likely to include works by Charles Ch绅sntte, Nute Chopin, Stephen Crane, Emily Dickinson, Henry James, Mark Twain, Edith Wharton, and others.

ENGL 524. Literature of the United States, 1920-1960 (3)
Representative works by United States writers from 1920 to 1960; likely to include works by Willa Cather, T. S. Eliot, William Faulkner, F. Scott Fitzgerald, Ernest Hemingway, Zora Neale Hurston, Eugene O’Neill, Katherine Anne Porter, Ezra Pound, John Steinbeck, and others.

ENGL 525. Literature of the United States, 1960 to Present (3)
United States writers from 1960 to the present; likely to include works by Edward Albee, Saul Bellow, Allen Ginsberg, Joseph Heller, Maxine Hong Kingston, Norman Mailer, Toni Morrison, Sylvia Plath, Adrienne Rich, Kurt Vonnegut, Eudora Welty, and others.

ENGL 526. Topics in Literature of the United States (3)
Topics in United States literature to include the literature of the South, Black writers in the U.S., the frontier and U.S. literature, the outcast in U.S. literature, the immigrant experience in U.S. literature. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

ENGL 527. Genre Studies (3)
Study of a specific literary genre or genres, such as the novel, tragedy, epic, and lyric. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

ENGL 528. Authors (3)
Works of a major author or, if useful comparisons and juxtapositions warrant, works of two or three authors, such as Jane Austen, Melville, Emerson, and Thoreau. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

ENGL 530. Chaucer (3)
Chaucer’s works, with emphasis on The Canterbury Tales and Troilus and Criseyde.

ENGL 533. Shakespeare (3)
An introduction to the writings of Shakespeare. This course cannot be used in place of English 302 to satisfy General Education requirements.

ENGL 534. Study of Shakespeare (3)
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)
Study of a literary period such as the Middle Ages or Renaissance. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

ENGL 537. Milton (3)
Milton’s writings, with emphasis on Paradise Lost.

ENGL 540A-540B. English Fiction (3-3)

ENGL 541A-541B. English Drama (3-3)
English dramatic literature from its beginnings to the present. Semester I: From the beginning to 1642. Semester II: Period following reopening of the theatres in 1660.

ENGL 542. British Literary Periods, 1660-1800 (3)
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)
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)
Study of a literary period such as the Postmodern Era. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

ENGL 549. Topics in English Literature (3)
The works of Spenser, the metaphysical school of poetry, the English satirists, major movements in contemporary English fiction, and the like. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

ENGL 563. Literature and Culture (3)
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 564. British Literary Periods, 1800-1900 (3)
Study of 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 566. Techniques of the Novel (3)
Prerequisite: 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)
Prerequisite: English 280.

Techniques of the short story from the writer’s point of view. Introduction to critical and theoretical literature on the short story. Includes a creative writing workshop.

ENGL 572. Techniques of the Novel (3)
Prerequisite: English 280.

Techniques of the novel from the writer’s point of view. Introduction to critical and theoretical literature on the novel. Includes a creative writing workshop.

ENGL 576. Literary Editing and Publishing (3)
Prerequisite: English 280.

Principles and practices of editing and literary publishing. Workshop on small press publishing. Includes editing and publishing workshop.

ENGL 577. Techniques of Screenwriting (3)
Prerequisite: English 280 or Television, Film, and New Media 110 or 510 for television, film, and new media majors.

Techniques of screenwriting. Introduction to critical and theoretical literature on screenwriting. Includes a creative writing workshop.
ENGL 579. Topics in Creative Writing (3)  
Prerequisite: English 280.  
Techniques of creative writing focusing on a specialized genre such as comedy, science fiction, and biography. Study of the critical and theoretical literature on the genre. Includes a creative writing workshop. See Class Schedule for specific content. Maximum credit six units.

ENGL 580. Writing of Poetry (3)  
Prerequisite: English 570.  
A creative writing workshop in poetry. Continuation of English 570. Maximum credit six units.

ENGL 581W. Writing of Fiction (3)  
Prerequisite: 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)  
Prerequisite: English 573.  
A creative writing workshop in long narrative, especially the novella or novel. Continuation of English 573. Maximum credit six units.

ENGL 584W. Writing Informal Essays (3)  
Prerequisites: 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)  
Prerequisite: English 577 or Television, Film, and New Media 110 or 510 for television, film, and new media majors.  
A creative writing workshop in screenwriting with emphasis on the feature film. Continuation of English 577. Includes playwriting and revising a television script or short film. Maximum credit six units.

ENGL 596. Selected Topics in English (1-3)  
Prerequisite: English 577 or Television, Film, and New Media 110 or 510 for television, film, and new media majors.  
A creative writing workshop in screenwriting with emphasis on the feature film. Continuation of English 577. Includes playwriting and revising a television script or short film. Maximum credit six units.

ENGL 596. Selected Topics in English (1-3)  
Prerequisite: English 577 or Television, Film, and New Media 110 or 510 for television, film, and new media majors.  
A creative writing workshop in screenwriting with emphasis on the feature film. Continuation of English 577. Includes playwriting and revising a television script or short film. Maximum credit six units.

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, Garcia 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 a bachelor’s degree. Maximum credit six units applicable to the M.F.A. degree in creative writing.

C LT 595. Literature and Aesthetics (3)  
Prerequisite: Six upper division units in literature or any of the other arts.  
Theoretical and experiential investigation of relationships between literature and the other arts; literary works in context of an inquiry into aesthetics. 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 pedagogy. Recommended for first-semester graduate students.

ENGL 601. Literary Study in a Multicultural World (3)  
Prerequisite: Credit or concurrent registration in English 600.  
Relationship of literature to gender, race, class, and nationality. Changing conceptions of literary canons. Exploration, through literary texts, of values in literature and the constituents of literary value.

ENGL 602. Literary Theory and Critical Practice (3)  
Prerequisite: Credit or concurrent registration in English 600.  
Major issues in the history of literary criticism as well as contemporary approaches. Study of criticism and theory accompanied by writing practicum. Students will write in several critical modes and build graduate level proficiency in analyzing literary issues. Prerequisite to 700-level seminars.
ENGL 604. 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 Garcia 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 in Creative Non-Fiction (3)
Prerequisite: Six units of graduate level creative writing courses. Advanced approach to writing book reviews and short critical essays. Professional focuses necessary for these forms. Emphasis on writing, reading, research, and direct function of these processes.

ENGL 790. M.A. Examination Preparation (3) Cr/NC
Prerequisites: Twenty-four units of graduate coursework that counts toward the M.A. in English. Student must be in final semester of study for the master's degree.
Survey of selected poetry, fiction, and drama in American, British, children's, and comparative literature included in M.A. examination. Emphasis on texts (close readings) and contexts (critical, literary, historical, cultural). Strongly recommended for students taking M.A. examination.
ENGL 796. Internship (3) Cr/NC
Prerequisites: Advancement to candidacy for the Master of Arts degree in English and comparative literature or admission to the Master of Fine Arts program and consent of the graduate adviser and supervising professor.
Work experience with a practicing professional or company in the community, such as working as an 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 or Project (3) Cr/NC/RP
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master’s degree.

ENGL 799B. Thesis Extension (0) Cr/NC
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.
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
Janet C. Harris, Ph.D., Professor of Exercise and Nutritional Sciences,
Director of School
Michael J. Buono, Ph.D., Professor of Exercise and Nutritional Sciences
Fred W. Kolkhorst, Ph.D., Professor of Exercise and Nutritional Sciences
Jeanne F. Nichols-Bernhard, Ph.D., Professor of Exercise and Nutritional Sciences
Larry S. Verity, Ph.D., Professor of Exercise and Nutritional Sciences
(Graduate Adviser)

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

Master of Science Degree in Exercise Physiology
Master of Science Degree in Nutritional Science and
Master of Science Degree in Exercise Physiology

The following materials should be mailed or delivered by February 1 for admission for the fall semester to:
School of Exercise and Nutritional Sciences
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7251

(1) Two letters of recommendation;
(2) Statement of purpose (1-2 pages describing applicant’s background, research interests/experiences, and goals).

Master of Science Degree in Exercise Physiology
Admission to the Degree Curriculum
All students must satisfy the general requirements for admission to the university with classified graduate standing as described in Part Two of this bulletin. In addition, a student applying for admission to the graduate program in exercise physiology must meet the following requirements.

1. A bachelor’s degree in kinesiology. Applicants who do not have an undergraduate major in kinesiology may be admitted to conditionally classified graduate standing on the recommendation of the graduate adviser of the school. Students will be required to complete or have equivalent preparation in Biology 212, 336, Exercise and Nutritional Sciences 303, 304, 304L, and an undergraduate statistics course in addition to the minimum 36 units required for the Master of Science degree.
2. A grade point average (GPA) of at least 3.0 in the last 60 units of coursework.
3. A minimum score of 475 on each of the verbal and quantitative sections of the GRE General Test.
Students will be admitted ONLY in the fall semester. Submit applications no later than February 1.

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy, as described in Part Four of this bulletin. Nine units of coursework in the official program must remain after advancement to candidacy.
Exercise Physiology

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 advisor 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):

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<tr>
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<tbody>
<tr>
<td>ENS 601</td>
<td>Experimental Methods in Exercise and Nutritional Sciences (3)</td>
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<td>Research Evaluation in Exercise and Nutritional Sciences (3)</td>
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<tr>
<td>ENS 632</td>
<td>Physiological Chemistry of Exercise (3)</td>
</tr>
<tr>
<td>ENS 659</td>
<td>Exercise Cardiology and Pathology (3)</td>
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<tr>
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<td>Seminar in Advanced Physiology of Exercise (3)</td>
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<tr>
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<td>Advanced Exercise Physiology Laboratory (3)</td>
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<tr>
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Electives (6 units): Electives to be selected with approval of graduate advisor.

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.

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<tr>
<td>NUTR 600</td>
<td>Seminar: Foods and Nutrition (3)</td>
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<td>NUTR 607</td>
<td>Child Nutrition (3)</td>
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<td>NUTR 608</td>
<td>Geriatric Nutrition (3)</td>
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<td>NUTR 610</td>
<td>Nutrition and Energy (3)</td>
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<td>NUTR 700</td>
<td>Seminar in Nutrition (3)</td>
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<td>NUTR 798</td>
<td>Special Study (1) Cr/NC/RP</td>
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Plan A

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Plan B

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<td>ENS 790</td>
<td>Seminar in Directed Readings (3) Cr/NC</td>
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</table>

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 Gradu-ate 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. 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. Preparation for comprehensive examination for students pursuing either an M.A. or an M.S. degree under Plan B. Preparation of a project or thesis for the master’s degree.

ENS 700. Seminar in Directed Readings (3) Cr/NC
Prerequisite: Exercise and Nutritional Sciences 602 and advancement to candidacy. Preparation for comprehensive examination for students pursuing an M.A. or an M.S. degree under Plan B. 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 799A. Thesis or Project (3) Cr/NC/RP
Prerequisite: Consent of department chair. Individual study. Maximum credit six units applicable to a master's degree.

ENS 799B. Thesis Extension (0) Cr/NC
Preparation of a project or thesis for the master's degree.

ENS 799C. Comprehensive Examination Extension (0) Cr/NC
Preparation of a project or thesis for the master's degree.

ENS 668. Adult Fitness: Exercise Leadership and Administration (3)
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 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. Preparation of a project or thesis for the 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
Preparation of a project or thesis for the master's degree.

ENS 799C. Comprehensive Examination Extension (0) Cr/NC
Preparation of a project or thesis for the master's degree.

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.
French
In the Department of European Studies
In the College of Arts and Letters

OFFICE: Education and Business Administration 304
TELEPHONE: 619-594-5111 / FAX: 619-594-8006
E-MAIL: french.coord@mail.sdsu.edu
http://www-rohan.sdsu.edu/~frenital/

Faculty
Edith J. Berkov, Ph.D., Professor of French, Chair of Department
Anne Donadey, Ph.D., Professor of French and
Women's Studies (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
JoAnne Cornwell, Ph.D., Associate Professor of French and
Africana Studies

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.

Graduate Admissions

The following materials should be submitted as a complete package directly to:
Department of European Studies
(Attention: Graduate Adviser)
San Diego State University
San Diego, CA 92182-7704

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

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

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

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

Department of European Studies
The following materials should be mailed or delivered to:
Department of European Studies
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7704

(1) Three letters of recommendation from professors, at least two of which should be from professors of French at the institution where the degree was granted (in sealed and signed envelopes);

(2) A writing sample (your best paper written in French, preferably for a literature class);

(3) The filled out graduate teaching assistant application form if you are interested in teaching French in the program. The graduate teaching assistant form should be requested from the graduate adviser for the M.A. in French before the application deadline.

Advancement to Candidacy
All students will be required to pass a qualifying examination in French given by the Department of European Studies. This examination will also satisfy the foreign language requirement as stated in Part 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. 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 796. Special Study (1-3) Cr/NC/RP**
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 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.
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,
Master's Degree Programs Adviser, and 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
Dennis Chang, Ph.D., Professor of Geography,
Doctoral Program Adviser
Maxine McFarlane, Ph.D., Associate Professor of Geography
Douglas A. Stow, Ph.D., Assistant Professor of Geography,
Cartography and GIS
Edward Aguado, Ph.D., Professor of Geography,
Remote Sensing and Image Processing
Piotr Jankowski, Ph.D., Professor of Geography
Byron Collier, Ph.D., Associate Professor of Geography
Travis Green, Ph.D., Associate Professor of Geography
George Christakos, Ph.D., Professor of Geography,
The Stephen and Mary Birch Foundation Chair in Geographical Studies
John F. O'Leary, Ph.D., Professor of Geography
Allen S. Hope, Ph.D., Professor of Geography
Stuart C. Aitken, Ph.D., Professor of Geography,
Faculty
Pascale J. Marcelli, Ph.D., Associate Professor of Geography
Li An, Ph.D., Associate Professor of Geography
John R. Weeks, Ph.D., Professor of Geography
Robert E. Johnson, Ph.D., Assistant Professor of Geography
John F. O'Leary, Ph.D., Professor of Geography
Piotr Jankowski, Ph.D., Professor of Geography
Douglas A. Stow, Ph.D., Professor of Geography,
Doctoral Program Adviser
John R. Weeks, Ph.D., Professor of Geography
Li An, Ph.D., Associate Professor of Geography
Fernando Bosco, Ph.D., Associate Professor of Geography
Pascale J. Marcelli, Ph.D., Associate Professor of Geography
André Skupin, Ph.D., Associate Professor of Geography
Ming-Hsiang Tsou, Ph.D., Associate Professor of Geography
Trent Biggs, Ph.D., Assistant 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
Comparative Urban Structure
Economic Geography
Social and Critical Theory
Social and Political Geography
Urban Cultural Geography
Urban and Regional Modeling

Environmental Geography
Society and Environment
Watershed/Ecosystem Analysis

Physical Geography
Biogeography
Climatology
Geomorphology
Hydrology

Group B – Spatial Analytical Techniques
Cartography and Internet Mapping
Geocomputation and Spatial Modeling
Geographic Information Systems
Remote Sensing and Image Processing
Spatial Quantitative and Qualitative Methods

The main regional foci are Latin America, Western Europe, the Pacific Rim, Mexico-U.S. borderlands, arctic, and arid lands. Further information on systematic areas, techniques and regional foci, as well as general program information can be obtained through the Department of Geography's Web site at http://geography.sdsu.edu.

Admission to Master's and Doctoral Study
Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee. All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Geography.

Graduate Admissions
The following materials should be submitted as a complete package directly to:
Graduate Admissions
Enrollment Services
San Diego State University
San Diego, CA 92182-7416

(1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;
Note:
- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

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

Admission to the Degree Curriculum

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.

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.

Applications must be received by the Department of Geography not later than February 1 for the Ph.D. program.

Application. Deadline is February 1 for the upcoming fall semester. Applicants are generally not admitted for the spring semester. Review procedures begin early February with admission notification beginning mid-March.

Applications must be received by the Department of Geography no later than February 1 for the Ph.D. program.

A high undergraduate grade point average, normally 3.25 or higher for the last 60 units taken (90quarter 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 the department, including a member from outside UCSB or a faculty member from another university. Chaired by the student's major professor, the joint doctoral committee shall be responsible for evaluating the dissertation proposal, administering and evaluating the qualifying examination, judging the dissertation, and administering and evaluating the dissertation defense.

Qualifying Examinations. The process of qualifying to write a Ph.D. dissertation has three steps. First, the student must take a written qualifying examination that normally consists of three portions devoted to: 1) the student's substantive area, 2) her or his technical field(s) of interest, and 3) general geographic thought and inquiry. Second, the student prepares a dissertation proposal that describes the dissertation topic, summarizes the relevant background literature, and presents a comprehensive research plan for the dissertation. Third, the student's doctoral committee will conduct an oral qualifying examination to ensure that the student possesses the full knowledge and competence required to carry out his or her 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 associations 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 504. Coastal and Submarine Geomorphology (3)
Prerequisites: Geography 101 and Mathematics 121 or 150.
Analysis of marine waves, of their modification in shallow waters, of coastal currents and tides. Interpretation of coastal and submarine relief in relation to environmental processes and their modification by humans. Field trips may be arranged.

GEOG 505. Fluvial Geomorphology (3)
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 101.
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)
Prerequisite: Geography 370.
Occurrence and utilization of water resources and the problems of water resource development. Field trips may be arranged.

GEOG 575. Geography of Recreational Land Use (3)
Prerequisite: Geography 101 or 102.
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 581. Cartographic Design (3)
Two lectures and three hours of laboratory.
Prerequisite: Geography 381 or 484.
Computer-assisted map production techniques with emphasis on map design and color use.

GEOG 583. Internet Mapping and Distributed GIServices (3)
Two lectures and three hours of laboratory.
Prerequisite: Geography 381 or 484.
Current development of Internet mapping and cartographic skills for web-based maps (multimedia, animation, and interactive design). Fundamental theories of distributed GIS to support Internet mapping with focus on distributed component technologies, Internet map servers and web services. Not open to students with credit in Geography 582.

GEOG 584. Geographic Information Systems Applications (3)
Two lectures and three hours of laboratory.
Prerequisite: Geography 484 or 587.
Conceptualization, completion, and implementation of geographic information systems (GIS) at local, regional, national, and global levels. Spatial analysis and modeling with GIS. GIS in planning, management, and research.

GEOG 585. Quantitative Methods in Geographic Research (3)
Prerequisite: Geography 385.
Application of statistical techniques to geographic research including simple regression and correlation, multiple regression, classification, factor analysis, and computer applications.

GEOG 586. Qualitative Methods in Geographic Research (3)
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. Maximum credit three units.

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.
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
http://www.geology.sdsu.edu

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

Department of Geological Sciences

The following materials should be mailed or delivered to:

Department of Geological Sciences
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1020

(1) Department application available at: http://www.geology.sdsu.edu/gradprogram/applicants.htm;

(2) Two letters of reference.

All student applications are evaluated competitively and no fixed numerical standards automatically qualify or disqualify a student for graduate study in the Department of Geological Sciences. Students will be admitted on the basis of merit in relation to space and faculty availability.

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) TOEFL 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 can be from either campus but who normally will be a member of the SDSU faculty. 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 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. 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 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: Agnew, Bock, Constable, Dorman, Fialko, Harding, Kent, Minster, Sandwell, Shearer, Vernon.

**University of California, San Diego:** Committee Members: Agnew, Bock, Constable, Dorman, Fialko.
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 502. Geology of North America (3)
Prerequisite: Geological Sciences 205.
A regional analysis of North American geology, its structural, stratigraphic, and tectonic patterns, and hypotheses concerning their origin and evolution.

GEOL 505. Photogeology and Remote Sensing (3)
Two lectures and three hours of laboratory.
Prerequisite: Geological Sciences 200.
Geologic interpretation of aerial and satellite photographs, elementary stereoscopy and stereometry applied to structural and stratigraphic problems, and compilation of geologic maps from annotated aerial and satellite photographs.

GEOL 508. Advanced Field Geology (4 or 6)
One lecture and three hours of laboratory plus 28 days in the field. For the option with six units: two additional weeks of field or laboratory work.
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.

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 geochemical 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 540. Marine Geology (3)
Prerequisites: Geological Sciences 205, and either Geological Sciences 324, 502, 514, or 537.
Plate tectonic origin and history of the ocean basins. Formation and distribution of sediments in response to biologic, chemical, and geologic processes.

GEOL 545. Descriptive Physical Oceanography (3)
Prerequisites: Mathematics 121 and 122, or 150; Physics 180A or 195.
Physical environment of oceans including heat, water, and salt budgets, physical properties of sea water, sea ice, air-sea relationships, effects of light and sound, distribution of temperature, salinity, density, surface current, deep circulation, water mass formation, instruments and methods of study.

GEOL 550. Engineering Geology (3)
Two lectures and three hours of laboratory.
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.
Prerequisite: Geological Sciences 306.
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 master’s degree with approval of the graduate adviser.
Geological Sciences

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 611. Seminar: Geoscience Education Research and Practice (3)
Prerequisite: Senior or graduate standing. Strongly recommended: Background in earth science or education. 
Research and practice in earth science education. Theory and practice in geoscience education at all levels, including research into constructivism in geoscience, influence of place and culture, and issues of spatial skills in the field and classroom.

GEOL 620. Seminar: Paleoenvironmental Reconstruction (3)
Prerequisite: Geological Sciences 537 or Biology 517 or 645. 
Methods used to reconstruct past environmental conditions and their integration to provide frameworks for related research in climate, ecology, biology, and evolution. Case studies range in time from the pre-human impact to the Mesozoic.

GEOL 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 palaeoenvironment, 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.

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, diageneis, 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 652. Multiphase Flow (3)
Two lectures and three hours of laboratory. 
Prerequisite: Geological Sciences 551. 
Movement of water through the unsaturated zone and nonaqueous phase liquids (NAPL) through subsurface. Topics include vadose zone characterization, monitoring, and modeling; light and dense NAPL movement, monitoring, and remediation.

GEOL 653. Ground Water Aquifer Testing (3)
Two lectures and three hours of laboratory. 
Prerequisite: Geological Sciences 551.
Theory and practice of conducting and analyzing constant-rate aquifer tests, step-drawdown tests, and slug injection tests. Analysis of results for confined, unconfined, leaky-confined, and fractured aquifers.

GEOL 656. 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 657. 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 666. Seminar: Igneous Petrology (3)
Prerequisite: Geological Sciences 551. 
Theory and practice of igneous petrologic 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. Seminar: Igneous Petrology (3)
Prerequisite: Geological Sciences 334. 
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 334. 
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.
German
In the Department of European Studies
In the College of Arts and Letters

Chair of Department: Edith J. Benkov, Ph.D.

Faculty
Enich 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.
Gerontology
In the College of Health and Human Services

OFFICE: Hepner Hall 203
TELEPHONE: 619-594-6765 / FAX: 619-594-2811

Faculty
Mario D. Garrett, Ph.D., Professor of Gerontology, Chair of Department

Adjunct Faculty
Anthony D’Angelo, M.S., Gerontology
Juan Ramón Valle, Ph.D., Gerontology

Assistantships
Graduate teaching and research assistantships in gerontology are available to a limited number of qualified students. Information regarding the availability of funds and the process for application may be obtained from the Department of Gerontology.

General Information
The Master of Science degree in gerontology is supported by faculty from several departments. The program is administered by the Department of Gerontology. The program is designed to provide systematic advanced education in gerontology for those planning to enter professions related to higher education, social services, health services, government, or business. The program will provide education for those interested in the area of policy, theory and its applications, health and aging, community services, program development, and biostatistical evaluation. Students will gain a better understanding of the roles of older people and their contributions to society. The program will also prepare students for entry to doctoral level education.

Admission to Graduate Study
The student must satisfy the general requirements for admission to the university with classified standing, as described in Part Two of this bulletin. Students whose preparation is deemed insufficient by the gerontology admissions committee may be admitted as conditionally classified and will be required to complete specific courses in addition to the minimum 36 units required for the degree. Students from other disciplines are encouraged to apply. Applicants should have a minimum undergraduate grade point average of 3.0 (on a 4.0 scale) during the last 60 semester units of undergraduate college/university coursework. The grade point average must be in concurrence with Division of Graduate Affairs requirements for admission. Admission requirements are outlined in the graduate application package for an advanced degree in gerontology at San Diego State University.

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

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

Graduate Admissions
The following materials should be submitted as a complete package directly to:
Graduate Admissions
Enrollment Services
San Diego State University
San Diego, CA 92182-7416

(1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended; Note:
• Students who attended SDSU need only submit transcripts for work completed since last attendance.

• Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

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

Department of Gerontology
The following materials should be submitted by May 1 for the fall semester to:
Department of Gerontology
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1872
(1) Three letters of reference in support of your application from academic references;
(2) Personal statement outlining your goals, background, interests, and abilities;
(3) Resume.

Advancement to Candidacy
All students must pass the general requirements for advancement to candidacy as described in Part 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:

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<tr>
<th>Units</th>
<th>Courses</th>
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<tr>
<td></td>
<td>GER 601 Theory in Gerontology</td>
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<td>GER 602 Policy Development, Analysis, and Evaluation</td>
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<td>GER 603 Healthy Aging</td>
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<td>GER 605 Long-Term Care</td>
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<td>GER 630 Research Methods and Evaluation</td>
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<td>GER 700A Practicum (Cr/NC)</td>
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<td>GER 700B Practicum (Cr/NC)</td>
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<td>GER 707 Research (Cr/NC/RP)</td>
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<td></td>
<td>GER 799A Thesis (Plan A) OR GER 798 (Plan B)</td>
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<td>PH 602 Biostatistics</td>
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Electives. A minimum of six units of electives is required. Selected with the approval of the student’s adviser, electives must include courses in gerontology or departments related to gerontology. Any gerontology graduate course or 500- to 700-level courses not taken for credit in the core curriculum qualify as electives. The breadth of courses available to supplement the core of required courses will be extensive, and draw on resources from across the university.

Plan A or Plan B. Students who complete Plan A, Thesis option for the M.S. degree in gerontology must include GER 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 GER 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.
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;
2. GRE scores (http://www.ets.org, SDSU institution code 4682);
3. TOEFL score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).

History

In the College of Arts and Letters

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. Elkkind, 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. Abalahin, 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.
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.

Field (a) Thematic, Comparative, and Interdisciplinary History
UPPER DIVISION COURSES

HIST 500. Topics in Ancient History (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 516. Imperialism and the Colonial Experience (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 527. The Holocaust in Feature Films (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 538. American Religious History (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 548. Race and Ethnicity in United States History (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 581. Topics in Urban History (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 (3)
Prerequisite: Upper division or graduate standing.
Variable topics in social and cultural history may include: Ritual in early modern Europe, radicals ad revolutionaries, intellectuals and society, families in former times, and American popular culture. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.

HIST 583. Topics in History of Gender and Sexuality (3)
Prerequisite: Upper division 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 (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 596. Selected Studies in History (1-4)
Topics in various fields of history, such as biography, war, science, technology, urbanization, minority groups, immigration, and capitalism. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 596, 696, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

Field (b). The Ancient Through Early Modern World
UPPER DIVISION COURSES

HIST 501. History of Ancient Near Eastern Civilizations (3)
Major civilizations of Near East from the origin of civilization to Roman Conquest, including Egyptians, Babylonians, Hebrews, and Persians. Social, political, and religious problems.

HIST 502. Ancient Greece (3)
Greek history from prehistoric period through Age of Alexander the Great. Emphasis on political, social, cultural and institutional developments, and historiography. Secondary attention to military, economic, and religious topics.
HIST 503. Ancient Rome (3)
Roman history from origins of Rome to fall of the Empire. Emphasis on political, social, cultural and institutional developments, and historiography. Secondary attention to military, economic, and religious topics.

HIST 504. The Early Middle Ages (3)
Europe and Mediterranean 300-1100 C.E. through various approaches: political, economic, social, and cultural. Collapse of Roman Empire, transformation of classical culture and regions that claimed its heritage; especially the kingdoms of western Europe, but also Byzantine and Arab empires. (Formerly numbered History 404.)

HIST 505. The Later Middle Ages (3)
Europe and the Mediterranean 1100-1450 C.E. through various approaches: political, economic, social, and cultural. Development of kingdoms of western Europe and relationship to Byzantine empire and other states. (Formerly numbered History 405.)

HIST 506. The Renaissance (3)
 Intellectual, artistic, social, and economic transformation in Europe from fourteenth to seventeenth centuries.

HIST 507. The Reformation (3)
Continental Europe, 1500-1648. Split of Christendom; political and intellectual dissent; social fabric of family life; relationship between gender, class, and power; cultural stratification of European society.

HIST 513. Early Scandinavia (3)
The formation and development of the Scandinavian kingdoms from the Viking Age to the end of the Napoleonic Wars. (Formerly numbered History 513A.)

HIST 528. Social History of Early Modern Europe (3)
Historical survey of European society emphasizing changes in the family, health, diet, standard of living, urbanism, crime, migration, and literacy, from 1350 to beginning of Industrial Revolution.

HIST 530. Colonial America (3)
Settlement and development of the English colonies in North America through the mid-eighteenth century. Contact of cultures, social structure, labor systems, religion, popular values, problems of imperial control, and political culture.

HIST 532. Topics in Early American History (3)
Prerequisites: Upper division 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 550. Colonial Mexico (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 553A. The Modern World (3)
Global movements of people, goods, and capital since 1500. Historical trends in labor and productivity, relationship of policy to economic growth, convergence and divergence, and impact of economic globalization on human welfare and the environment.

HIST 556. Chinese Civilization: The Great Traditions (3)
China's institutional and cultural development from ancient to pre-modern times. Emphasis on traditional philosophy, religions, literature, and the arts.

Field (c). The Modern World
UPPER DIVISION COURSES

HIST 509. British Century: Waterloo to World War I (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 (3)
Forces and events that shaped Europe in period prior to and during World War I, 1890-1919.

HIST 512B. The Age of Dictators and Contemporary Europe (3)
Europe in the age of dictatorship, world war, decline, and recovery.

HIST 515. Globalization in Historical Perspective: 1500 to the Present (3)
Prerequisite: Upper division or graduate standing.
Global movements of people, goods, and capital since 1500. Historical trends in labor and productivity, relationship of policy to economic growth, convergence and divergence, and impact of economic globalization on human welfare and the environment.

HIST 517. Modern Germany (3)
Political, social, and economic development of Germany from 1848 to present.

HIST 533. Antebellum America (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 (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 (3)
The United States in Depression, War, and Cold War. (Formerly numbered History 535B.)

HIST 536. The United States Since World War II (3)
Major foreign and domestic issues confronting the United States, and the government policies and popular movements generated in response.

HIST 539. Topics in the History of the American West (3)
Prerequisites: Upper division 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 540. Environmental History of the United States (3)
The relationship of Americans to their environment from colonial times to the present with emphasis on how attitudes and values have affected personal behavior and public policy toward the land.

HIST 543. Vietnam Wars (3)
Prerequisites: Upper division or graduate standing and six units in history.

HIST 544A. Early American Foreign Relations (3)
Development of American foreign relations from Colonial Period to the Spanish-American-Filipino War.

HIST 544B. Modern American Foreign Relations (3)
Development of American foreign relations since 1900.

HIST 545. Constitutional History of the United States (3)
Development of American constitutional ideals and institutions from colonial period to the present. Examines historical context of significant legal issues and constitutional cases.

HIST 551. Modern Mexico (3)
Social history of Mexico since early national period using primary and secondary sources. Processes of social and cultural negotiation involving gender, religion, environment, medicine, and urban experience.
HIST 552. Brazil (3)
Survey of history of Brazil from Portuguese backgrounds to present. Brazil as a tropical society. Recommended for students minoring in Portuguese.

HIST 558. Latin America in World Affairs (3)
History of Latin America’s political and economic relations with Europe, the Soviet Union, the United States, and the Third World.

HIST 564. Southeast Asia in the Modern World (3)
Southeast Asian history since 1800 with attention to colonialism, sociocultural change, Chinese diaspora, nationalism and independence, and economic development. Considers transnational comparisons among Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

HIST 567. China in Revolution (3)
China’s history during the tumultuous nineteenth and twentieth centuries. China’s forced encounter with Western imperialism, rural and urban social movements. Impact of Mao’s Revolution on everyday life in China, successes, limitations of China’s recent reform policies.

HIST 570. Japan in the Modern World (3)
Japan’s emergence as a modern state since the nineteenth century, and ongoing struggle to redefine Japanese identity. Examines Japan’s engagement with modernity as seen through changes in political discourse, gender relations, international relations, intellectual trends, and economic development.

HIST 574. Arab-Israeli Relations, Past and Present (3)
Arab-Israeli conflict and diplomacy over Palestine from perspectives of Zionism, Arab nationalism, and Great Power relations from nineteenth century to present.

HIST 585. History of the Sixties (3)
Variable topics in the history of the 1960s may include: America in the 1960s, Africa in the 1960s, politics and protests in 1960s, Europe in the 1960s. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.

GRADUATE COURSES

NOTE: All graduate courses in the Department of History have a prerequisite of 12 units of upper division courses in history, or consent of the instructor.

HIST 601. Seminar in Historical Methods (3)
Historical methodologies, historiography, and critical analysis.

HIST 620. Directed Readings in European History (3)
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 661; 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 690. Area Studies in History (3) Cr/NC
Prerequisite: Consent of instructor.
Preparation of a project or thesis for the master’s degree. Maximum credit three units applicable to a master’s degree.

HIST 795. Area Studies in History (3) Cr/NC
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.
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 Information and Decision Systems

Khaled 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 who possess the knowledge and skills to address 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 mandatory 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 HSEC 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) TOEFL score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).

Homeland Security Program

The following materials should be mailed or delivered to:

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.

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 696 and 698 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” in this section of the bulletin.
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
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 study composed of coursework in at least two but not more than three departments or schools at SDSU. The Division of Graduate Affairs administers this program following procedures established by the Graduate Council.

The proposed program must not be substantially available in a current graduate program offered at the university, and it must have adequate focus and coherence in cognate disciplines. Prerequisite courses may be required to support the courses in the student’s program of study.

A graduate supervisory committee and a field of study shall be chosen, subject to the approval of the dean of the Division of Graduate Affairs. The supervisory committee shall consist of not less than three full-time faculty representative of the areas in which the student intends to pursue the degree. The graduate dean or designee shall serve as an ex officio member of the committee.

Admission to Graduate Study

In addition to satisfying the requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin, the student must (1) possess an academic background appropriate to the proposed program and have achieved an undergraduate grade point average of 3.0; and (2) complete the GRE General Test with a satisfactory score on the verbal and quantitative sections. Since an approved course of study is required for classified admission of this major, applicants may be admitted to the university in conditionally classified status pending formal approval of a program of study. Students admitted conditionally must meet with the associate dean of the Division of Graduate Affairs as soon as possible after admission to the program and must submit an approved program of study within two semesters. If the proposed curriculum is not approved, the student will have the option of applying for admission to an alternative advanced degree program.

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

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

Graduate Admissions

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

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

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

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

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

Division of Graduate Affairs

An essay explaining the rationale for using the Interdisciplinary Studies program as the vehicle for the master's degree must be submitted by November 1 for admission for the spring semester and May 1 for the fall semester to:

Associate Dean
Division of Graduate Affairs
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-0220

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

1. After meeting with the assistant dean of the Division of Graduate Affairs, a student interested in being formally considered for the Interdisciplinary Studies program should complete and follow the instructions on the form, “Request for Permission to Pursue an Interdisciplinary Studies Master’s Degree,” which is available in the Division of Graduate Affairs. The applicant must initially seek out a potential faculty adviser and two additional faculty members who have the expertise and interest in advising and supporting the applicant in the proposed program of study.

2. When the student’s portion of the form has been completed, the major adviser selected, and other potential supervisory committee members contacted, an appointment with the 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.
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: Advance 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 advance 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.
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
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 official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

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

All applicants must post a Graduate Record Examination (GRE) verbal score of 450 or higher; a GRE quantitative score of 450 or higher; a combined GRE verbal and quantitative score of 950 or higher; and a GRE writing assessment (GRE-W) of level 4 or higher;

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

For international applicants for whom English is not their first language, TOEFL paper scores of 550 (or 213 online) or higher. 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, 796, 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 505. Government and 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. Responsibilities of telecommunication organizations as prescribed by law, government policies and regulations, and significant court decisions. (Formerly numbered Communication 505.)

JMS 506. Advertising and Society (3)
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. (Formerly numbered Communication 506.)

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. (Formerly numbered Journalism 529.)

JMS 550. Multimedia News Laboratory (3)
One lecture and four hours of activity. Prerequisites: Journalism and Media Studies 300, 310W, 420 and three units selected from Journalism and Media Studies 315, 430, 445 with grades of C (2.0) or better in each course. Proof of completion of prerequisites required: Copy of transcript. Capstone course using skills and knowledge acquired in critical thinking, writing, reporting, editing, production, and design courses. Teams prepare multimedia news content. Field and laboratory experience. (Formerly numbered Journalism 550.)

JMS 560. Advertising Research (3)
Prerequisites: Journalism and Media Studies 310W and 460 with grades of C (2.0) or better in each course. Admission to advertising majors and minors, Major Code: 06041. Proof of completion of prerequisites required: Copy of transcript. Systematic application of quantitative and qualitative research to planning, design, and management of advertising campaigns. Cases, practices, and problems in application of research to consumer, market analysis, positioning, creative selection, media planning, and campaign evaluation. (Formerly numbered Communication 560.)

JMS 565. Advertising Campaigns (3)
Prerequisites: Journalism and Media Studies 461 and 560 with grades of C (2.0) or better in each course. Planning and creation of advertising campaigns including situation analysis and strategy, advertising and marketing objectives, consumer analysis and target audience selection, creative development, media strategy and tactics, sales promotion, and campaign evaluation. (Formerly numbered Communication 565.)

JMS 574. International Advertising (3)
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. (Formerly numbered Communication 574.)
JMS 581. Public Relations Research (3)
Two lectures and two hours of activity.
Prerequisites: Journalism and Media Studies 310W and 480 with grades of C (2.0) or better in each course. Admission to public relations majors and minors. Major Code: 0599C. Proof of completion of prerequisites required: Copy of transcript.
Qualitative and quantitative methods used in research to plan, track, and evaluate public relations programs. Computerized statistical analysis. (Formerly numbered Communication 581.)

JMS 585. Professional Practices in Public Relations (3)
Prerequisites: Journalism and Media Studies 481 and 581 with grades of C (2.0) or better in each course.
Cases in public relations management. Theory and practice of issues management, integration of the public relations function in strategic management in a variety of corporate, governmental, non-profit, social, and cultural organizations. (Formerly numbered Communication 585.)

JMS 589. Ethical Issues in Mediated Communication (3)
Prerequisites: Upper division standing or graduate standing. Admission to a major or minor for undergraduates in the School of Journalism and Media Studies. Proof of completion of prerequisites required: Copy of transcript.
Ethical challenges faced by journalists, public relations and advertising professionals, and other communication specialists. Classical and modern ethical concepts and issues as they apply to mediated communication, as well as codes of ethics. (Formerly numbered Communication 589.)

JMS 591. International Telecommunications (3)
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. (Formerly numbered Communication 591.)

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. (Formerly numbered Communication 600A.)

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. (Formerly numbered Communication 600B.)

JMS 602. Seminar: Military Public Affairs (3)
Prerequisites: Admission to M.A. program in the School of Journalism and Media Studies and consent of instructor.
Public relations applied to military public affairs. Public relations theory; history, ethics, social responsibility, management, law, and technology. Current problems and issues in military public affairs.

JMS 603. Seminar: Professional Development in Military Public Affairs (3)
Prerequisites: Admission to M.A. program in the School of Journalism and Media Studies and consent of instructor.
Development of professional expertise in preparing research findings for external review, using methods that include statistical data analysis. Prepare for professional examination in public relations.

JMS 620. Seminar: Quantitative Methods in Media Research (3)
Prerequisites: Journalism and Media Studies 600A and 600B or Communication 561.
Research, design, computer statistical analysis, and reporting of surveys, content analysis, and experimental studies in media contexts.

JMS 696. Special Topics (1-3)
Prerequisites: Journalism and Media Studies 600A and 600B.
Intensive study in specific areas of journalism and media studies. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

JMS 701. Seminar: Mass Communication Problems (3)
Prerequisites: Journalism and Media Studies 600A and 600B.
Reading, investigation, and research concerning current topics in problems of mass media. May be repeated with new content. Maximum credit six units. (Formerly numbered Communication 701.)

JMS 708. Seminar: Mass Communication and Society (3)
Prerequisites: Journalism and Media Studies 600A and 600B.
Rights, responsibilities, and characteristics of mass media and mass communication practitioners. Characteristics and responsibilities of audiences and society. (Formerly numbered Communication 708.)

JMS 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. (Formerly numbered Communication 764.)

JMS 775. Seminar: Mediated Communication in International Settings (3)
Prerequisites: Journalism and Media Studies 600A and 600B.
Cultural differences and role culture plays in construction and interpretation of mediated communication in international contexts.

JMS 780. Seminar: Public Relations Research (3)
Prerequisites: Journalism and Media Studies 600A and 600B.
Analysis and critique of contemporary public relations programs and theory. Development of a comprehensive public relations project involving original research. (Formerly numbered Communication 780.)

JMS 785. Seminar: Advertising Research (3)
Prerequisites: Journalism and Media Studies 600A and 600B.
Advanced topics in theory, design, and utilization of advertising research. (Formerly numbered Communication 785.)

JMS 798. Special Study (1-3) Cr/NC/ RP
Prerequisites: Journalism and Media Studies 600A and 600B.
Contract required. Arranged with graduate coordinator in area of study. Individual study. Maximum credit six units applicable to a master’s degree.
JMS 799A. Thesis or Project (3) Cr/NC/RP
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master’s degree.

JMS 799B. Thesis or Project Extension (0) Cr/NC
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.
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
Janet C. Harris, Ph.D., Professor of Exercise and Nutritional Sciences, Director of School
Peter M. Aufsesser, Ph.D., Professor of Exercise and Nutritional Sciences
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
Robert A. Mechikoff, Ph.D., Professor of Exercise and Nutritional Sciences
Patricia Patterson, Ph.D., Professor of Exercise and Nutritional Sciences
Roger Simmons, Ph.D., Professor of Exercise and Nutritional Sciences
Larry S. Verity, Ph.D., Professor of Exercise and Nutritional Sciences
Daniel J. Cipriani, Ph.D., Associate Professor of Exercise and Nutritional Sciences
Susan S. Levy, Ph.D., Associate Professor of Exercise and Nutritional Sciences
Simon J. Marshall, Ph.D., Associate Professor of Exercise and Nutritional Sciences
Denise A. Wixsten, 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) TOEFL score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).
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 Neuropsychological 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 Neuropsychological and Mechanical Bases of Therapeutic Exercise (3)
Prerequisites: Exercise and Nutritional Sciences 462, 463, 463L. Mechanical and neuropsychological 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, electromyography, 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, 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 664. Seminar in Anthropometry and Motor Performance (3)
Prerequisites: Exercise and Nutritional Sciences 301 and 303.
Relationships between body structure and motor performance as compared through the techniques of anthropometry, somatotyping and body composition.

ENS 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

Faculty Committee for Latin American Studies
Ramona L. Pérez, Ph.D., Associate Professor of Anthropology
Chair of Committee (Graduate Coordinator)
Catalina Armuedo-Dorantes, Ph.D., Professor of Economics
Claudia V. Angelelli, Ph.D., Professor of Spanish
Joseph W. Ball, Ph.D., Distinguished Professor of Anthropology
Aida Blanco, Ph.D., Professor of Portuguese
David V. Carruthers, Ph.D., Professor of Political Science
James B. Gerber, Ph.D., Professor of Economics
(Graduate Coordinator)
Lawrence A. Harzeg, 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. Sobol, Ph.D., Professor of Anthropology
Gregory A. Talavera, M.D., Professor of Public Health
John R. Weeks, Ph.D., Professor of Geography
Fernando Bosco, Ph.D., Associate Professor of Geography
Stephen A. Colston, Ph.D., Associate Professor of History
Adelaída R. Del Castillo, Ph.D., Associate Professor of Chicana and Chicano Studies
Paula S. De Vos, Ph.D., Associate Professor of History
Jill Esbenhade, Ph.D., Associate Professor of Sociology
Juan M. Godoy, Ph.D., Associate Professor of Spanish
Jonathan Graubart, Ph.D., Associate Professor of Political Science
Irène Lara, Ph.D., Associate Professor of Women's Studies
Kristen Hill Maher, Ph.D., Associate Professor of Political Science
Enrico A. Marcelli, Ph.D., Associate Professor of Sociology
José Mario Martin-Flores, Ph.D., Associate Professor of Spanish
Doreen J. Mattingly, Ph.D., Associate Professor of Women's Studies
Jeffrey S. McIllwain, Ph.D., Associate Professor of Public Affairs
Thomas P. Passananti, Ph.D., Associate Professor of History
Frederick J. Conway, Ph.D., Assistant Professor of Anthropology
Nancy DeFeo, 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
Matthew T. Lauer, Ph.D., Assistant Professor of Anthropology
Peter P. Lindquist, Ph.D., Assistant Professor of Spanish
Arion T. Mayes, Ph.D., Assistant Professor of Anthropology
Kevin Wilbert Swanson, Ph.D., Assistant Professor of Geography
Stephen A. Colston, Ph.D., Associate Professor of Art, Design, and Art History

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.

Graduate Admissions
The following materials should be submitted as a complete package directly to:
Graduate Admissions
Enrollment Services
San Diego State University
San Diego, CA 92182-7416

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

Master of Arts Degree in Latin American Studies
The following materials should be mailed or delivered to:
Center for Latin American Studies
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4446

(1) Personal statement;
(2) Three letters of reference.

Master of Business Administration Degree and Master of Arts Degree in Latin American Studies
The following materials should be submitted by November 1 (October 1 for international students) for admission for the spring semester and May 1 for the fall semester to:
Center for Latin American Studies
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4446

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

Master of Public Health Degree and Master of Arts Degree in Latin American Studies
The following materials should be mailed or delivered to:
Center for Latin American Studies
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4443

(1) Complete the concurrent degree program application Parts I and II (includes narrative statement);
(2) Submit three letters of recommendation;
(3) Provide evidence of competence in or prior academic preparation in Latin American Studies, social and/or behavioral sciences, biological sciences, and/or health sciences;
(4) Provide evidence of professional and academic activities related to Latin American Studies or the chosen area of concentration in the Graduate School of Public Health.
Master of Arts Degree in Latin American Studies

General Information
Since 1976 the Center for Latin American Studies has been designated a National Resource Center for Latin American Studies (one of only eleven in the nation) by the United States Department of Education and funded through a Title VI grant. The Master of Arts degree administered by the center is an interdisciplinary program drawing on the expertise of an outstanding Latin Americanist faculty from the following departments: Anthropology, Art, Comparative Literature, Economics, Geography, History, Political Science, Public Affairs, Sociology, Spanish and Portuguese Languages and Literatures, Women's Studies, and the College of Business Administration. Emphasis in the program is placed on the central issue of "Modernization and Urbanization" in Latin America and offered through nine courses from nine different departments.

Research interests and areas of expertise of the faculty include: demography, economic development, folk art, Indians and peasants, land tenure systems, the Latin American press, mental health and aging in Mexico, militarism and guerrilla warfare, Spanish American prose, poetry and criticism, theatre, U.S.-Latin American relations, and the U.S.-Mexico border.

Admission to the Degree Curriculum
In addition to meeting the requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin, the student must present the Bachelor of Arts degree with not less than 18 units of courses of Latin American content in three areas. A student whose preparation is deemed insufficient by his graduate adviser or by the Latin American Studies committee will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy described in Part 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: 03061) (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:

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<tr>
<th>Department</th>
<th>600- and 700-numbered Courses</th>
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<td>Department A</td>
<td>6 units</td>
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</tbody>
</table>

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.

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 statistical 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
     - IDS 688 Information Systems in Organizations (3)
     - IDS 691 Decision Support Systems (3)
   - Complete 15 units in Business Administration to include:
     - FIN 654 Seminar in International Finance (3)
     - MGT 710 Seminar in World Business Environment (3)
     - MGT 723 Seminar in International Strategic Management (3)
     - MGT 731 Seminar in Strategic Management of Technology and Innovation (3)
     - MKTG 769 Seminar in International Marketing (3)
   - Complete 24 units in courses of Latin American content, including the following required courses:
     - LATAM 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 665 Experimental Topics* (3)
  - LATAM 795 Latin American Studies Internship (3) Cr/NC
  - LATAM 797 Research (3) Cr/NC/RP

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

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

- **History**
  - HIST 550 Colonial Mexico (3)
  - HIST 551 Modern Mexico (3)
  - HIST 552 Brazil (3)
  - HIST 558 Latin America in World Affairs (3)
  - HIST 640 Directed Readings in Latin American History (3)

- **Political Science**
  - POL S 564 Environmental Politics in Global Perspective (3)
  - POL S 566 Political Change in Latin America (3)
  - POL S 567 Political Systems of Latin America (3)
  - POL S 568 Mexican Politics (3)
  - POL S 651 Seminar in Migration and Border Politics (3)
  - POL S 667 Seminar in Latin American Political Systems (3)

- **Sociology**
  - SOC 554 United States-Mexico Transborder Populations and Social Change (3)
  - SOC 740 Seminar in Social Psychology: Sociological Approaches (3)

California Western School of Law

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

Acceptable when of relevant content; check with the Latin American Studies graduate adviser before enrolling. Students must apply to enroll under the provisions of the affiliation agreement with the California Western School of Law.

6. In addition, the student must complete MGT 797 (Research) and 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 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

<table>
<thead>
<tr>
<th>Core Courses (15 units)</th>
<th>Prescribed Electives (18 units from at least two departments)</th>
<th>Culminating Experience (6 units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P H 601 (3)</td>
<td>ANTH 508 (3) LATAM 560 (3) POL S 667 (3) P H 797 or LATAM 797 (3)</td>
<td></td>
</tr>
<tr>
<td>P H 602 (3)</td>
<td>ANTH 520 (3) LATAM 580 (3) POL S 696 (3) P H 799A or LATAM 799A (3)</td>
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</tr>
<tr>
<td>P H 604 (3)</td>
<td>ANTH 529 (3) LATAM 696 (3) SOC 555 (3)</td>
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</tr>
<tr>
<td>P H 605 (3)</td>
<td>ANTH 583 (3) LATAM 700 (3) SOC 730 (3)</td>
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<tr>
<td>LATAM 601 (3)</td>
<td>ANTH 603 (3) LATAM 798 (3) SOC 740 (3)</td>
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<tr>
<td></td>
<td>HIST 551 (3) POL S 555 (3) WMNST 512 (3)</td>
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<td>HIST 552 (3) POL S 568 (3) WMNST 565 (3)</td>
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<tr>
<td></td>
<td>HIST 640 (3) POL S 655 (3) WMNST 580 (3)</td>
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<tr>
<td></td>
<td>POL S 661 (3) WMNST 605 (3)</td>
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</table>

Public Health Concentration Requirements
Total Units = 24

(Students must complete one of the following concentrations)

Epidemiology Concentration
(SIMS Code: 997311)
Total Epidemiology Units = 24

<table>
<thead>
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<th>Required Courses (15 units)</th>
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<tr>
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<td>P H 621 (3)</td>
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<tr>
<td>P H 622 (3)</td>
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<tr>
<td>P H 623 (3)</td>
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<table>
<thead>
<tr>
<th>Prescribed Electives (6 units)</th>
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<tbody>
<tr>
<td>P H 625 (3) P H 722 (3)</td>
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<tr>
<td>P H 626 (3) P H 724 (3)</td>
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<tr>
<td>P H 628 (3) P H 726 (3)</td>
</tr>
<tr>
<td>P H 649 (3) P H 823 (3)</td>
</tr>
<tr>
<td>P H 700A (3) P H 824 (3)</td>
</tr>
<tr>
<td>P H 721 (3)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Electives (3 units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
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</tbody>
</table>

Health Promotion and Behavioral Science Concentration
(SIMS Code: 997312)
Total Health Promotion and Behavioral Science Units = 24

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<thead>
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<th>Required Courses (15 units)</th>
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<td>P H 607 (3)</td>
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<tr>
<td>P H 661 (3)</td>
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<tr>
<td>P H 662 (3)</td>
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<td>P H 668 (3)</td>
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<td>P H 700F (3)</td>
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<td>P H 721 (3)</td>
</tr>
<tr>
<td>P H 762 (3)</td>
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<table>
<thead>
<tr>
<th>Prescribed Electives (6 units)</th>
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<tbody>
<tr>
<td>P H 664 (3)</td>
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<tr>
<td>P H 667 (3)</td>
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<td>P H 668 (3)</td>
</tr>
<tr>
<td>P H 700F (3)</td>
</tr>
<tr>
<td>P H 721 (3)</td>
</tr>
<tr>
<td>P H 738 (3)</td>
</tr>
<tr>
<td>P H 798 (1-3)</td>
</tr>
</tbody>
</table>

Environmental Health Concentration
(SIMS Code: 997313)
Total Environmental Health Units = 24

<table>
<thead>
<tr>
<th>Required Courses (18 units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P H 603 (3)</td>
</tr>
<tr>
<td>P H 632 (3)</td>
</tr>
<tr>
<td>P H 634 (3)</td>
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<td>P H 636 (3)</td>
</tr>
<tr>
<td>P H 638A (3)</td>
</tr>
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<td>P H 639 (3)</td>
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</table>

<table>
<thead>
<tr>
<th>Prescribed Electives (at least 6 units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P H 630 (3)</td>
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<td>P H 635 (3)</td>
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<tr>
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<tr>
<td>P H 721 (3)</td>
</tr>
<tr>
<td>P H 738 (3)</td>
</tr>
<tr>
<td>P H 798 (1-3)</td>
</tr>
</tbody>
</table>
## Latin American Studies

### 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.

### UPPPER 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)**
- 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.

- 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)

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ANTH 508</td>
<td>Medical Anthropology (3)</td>
</tr>
<tr>
<td>ANTH 520</td>
<td>Ethnographic Field Methods (3)</td>
</tr>
<tr>
<td>ANTH 582</td>
<td>Regional Anthropology (3)*</td>
</tr>
<tr>
<td>ANTH 583</td>
<td>Topical Anthropology (3)*</td>
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**Art Courses (ART)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ART 561</td>
<td>Mesoamerican Art: Olmecs to Aztecs (3)</td>
</tr>
<tr>
<td>ART 562</td>
<td>Art of Latin America (3)</td>
</tr>
<tr>
<td>ART 596</td>
<td>Advanced Studies in Art and Art History (1-4)*</td>
</tr>
</tbody>
</table>

### Communication Course (COMM)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 596</td>
<td>Selected Topics (1-4)*</td>
</tr>
</tbody>
</table>

### Comparative Literature Courses (C LT)

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>C LT 594</td>
<td>Topics in Literature and the Arts (3)</td>
</tr>
<tr>
<td>C LT 596</td>
<td>Topics in Comparative Literature (3)*</td>
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### Economics Courses (ECON)

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>ECON 561</td>
<td>International Trade (3)</td>
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<td>ECON 565</td>
<td>North American Economic Relations (3)</td>
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<tr>
<td>ECON 592</td>
<td>International Monetary Theory and Policy (3)</td>
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<tr>
<td>ECON 596</td>
<td>Experimental Topics (3)*</td>
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### Geography Courses (GEOG)

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<tbody>
<tr>
<td>GEOG 507</td>
<td>Geography of Natural Vegetation (3)</td>
</tr>
<tr>
<td>GEOG 509</td>
<td>Regional Climatology (3)</td>
</tr>
<tr>
<td>GEOG 554</td>
<td>World Cities: Comparative Approaches to Urbanization (3)</td>
</tr>
<tr>
<td>GEOG 596</td>
<td>Advanced Topics in Geography (1-3)*</td>
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### History Courses (HIST)

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>HIST 550</td>
<td>Colonial Mexico (3)</td>
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<tr>
<td>HIST 551</td>
<td>Modern Mexico (3)</td>
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<td>HIST 552</td>
<td>Brazil (3)</td>
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<td>HIST 558</td>
<td>Latin America in World Affairs (3)</td>
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<td>HIST 596</td>
<td>Selected Studies in History (1-4)*</td>
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### Journalism and Media Studies Course (JMS)

<table>
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<th>Course Code</th>
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<tbody>
<tr>
<td>JMS 591</td>
<td>International Telecommunications (3)</td>
</tr>
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</table>

### 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)

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<th>Course Code</th>
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<tr>
<td>POL S 531</td>
<td>Interest Groups and Political Movements (3)</td>
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<tr>
<td>POL S 555</td>
<td>Comparative Political Systems (3)</td>
</tr>
<tr>
<td>POL S 560</td>
<td>Comparative Public Policy (3)</td>
</tr>
<tr>
<td>POL S 564</td>
<td>Environmental Politics in Global Perspective (3)</td>
</tr>
<tr>
<td>POL S 566</td>
<td>Political Change in Latin America (3)</td>
</tr>
<tr>
<td>POL S 567</td>
<td>Political Systems of Latin America (3)</td>
</tr>
<tr>
<td>POL S 568</td>
<td>Mexican Politics (3)</td>
</tr>
<tr>
<td>POL S 577</td>
<td>Principles of International Law (3)</td>
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### Portuguese Course (PORT)

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<tbody>
<tr>
<td>PORT 535</td>
<td>Brazilian Literature (3)</td>
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### Sociology Courses (SOC)

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<tr>
<td>SOC 522</td>
<td>The Family in Comparative and Cross-Cultural Perspectives (3)</td>
</tr>
<tr>
<td>SOC 555</td>
<td>Immigrants and Refugees in Contemporary American Society (3)</td>
</tr>
<tr>
<td>SOC 596</td>
<td>Current Topics in Sociology (1-3)*</td>
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### Spanish Courses (SPAN)

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<th>Course Code</th>
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<tr>
<td>SPAN 502</td>
<td>Genre Studies in Spanish American Literature (3)</td>
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<tr>
<td>SPAN 515</td>
<td>Mexican Literature (3)</td>
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<tr>
<td>SPAN 520</td>
<td>Caribbean Area Countries Literature (3)</td>
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<tr>
<td>SPAN 549</td>
<td>Spanish Phonetics and Phonology (3)</td>
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<tr>
<td>SPAN 581</td>
<td>Mexican Sociolinguistics (3)</td>
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<td>SPAN 596</td>
<td>Selected Studies in Spanish (3)*</td>
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### Women's Studies Courses (WMNST)

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<tr>
<td>WMNST 512</td>
<td>Latinas in the Americas (3)</td>
</tr>
<tr>
<td>WMNST 515</td>
<td>Women: Myth, Ritual, and the Sacred (3)</td>
</tr>
<tr>
<td>WMNST 553</td>
<td>Women and the Creative Arts (3)*</td>
</tr>
<tr>
<td>WMNST 565</td>
<td>Women: Health, Healing, and Medicine (3)</td>
</tr>
<tr>
<td>WMNST 580</td>
<td>Women, Development, and the Global Economy (3)</td>
</tr>
<tr>
<td>WMNST 596</td>
<td>Topics in Women’s Studies (3)*</td>
</tr>
</tbody>
</table>

*Acceptable when of relevant content.
GRADUATE COURSES

LATAM 600. Seminar in Latin American Studies (3)
Prerequisite: Graduate standing.
Core seminar in Latin American studies. Historical, conceptual, and methodological survey of Latin American studies from first European conquests in western hemisphere to end of twentieth century.

LATAM 601. Seminar on Methodology of Latin American Studies (3)
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
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.
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 in Archaeology (3)
ANTH 602. Seminar in Archeology (3)
ANTH 603. Seminar in Ethnology (3)
ANTH 621. Seminar in Historical Anthropology (3)
ANTH 797. Research (3) Cr/NC/RP
ANTH 798. Special Study (1-3) Cr/NC/RP

Art Courses (ART)
ART 760. Seminar in Twentieth Century Art (3)
ART 798. Special Study (1-3) Cr/NC/RP

City Planning Course (C P)
C P 670. History of Urban Planning (3)

Communication Course (COMM)
COMM 798. Special Study (1-3) Cr/NC/RP

Economics Courses (ECON)
ECON 696. Experimental Topics (3)*
ECON 700. Seminar in Microeconomic Applications (3)*
ECON 720. Seminar in Development and Planning (3)
ECON 730. Seminar in Macroeconomic Policy (3)
ECON 750. Seminar in History of Economic Thought (3)*
ECON 797. Research (3) Cr/NC/RP
ECON 798. Special Study (1-3) Cr/NC/RP

English Courses (ENGL)
ENGL 601. Literary Study in a Multicultural World (3)*
ENGL 604. Seminar: Literary Period or Movement (3)*
ENGL 606. Seminar: Literary Type (3)*
ENGL 626. Comparative Literature (3)*
ENGL 696. Special Topics (3)*
ENGL 700. Seminar: A Major Author or Authors (3)*
ENGL 726. Seminar: Issues in Comparative Literature (3)*
ENGL 798. Special Study (1-3) Cr/NC/RP

Geography Courses (GEOG)
GEOG 696. Advanced Special Topics in Geography (3)*
GEOG 740. Seminar in Human Geography (3)*
GEOG 760. Seminar in Behavioral and Social Geography (3)*
GEOG 797. Research (1-3) Cr/NC/RP
GEOG 798. Special Study (1-3) Cr/NC/RP

History Courses (HIST)
HIST 640. Directed Readings in Latin American History (3)
HIST 795. Area Studies in History (1-3) Cr/NC*
HIST 797. Research (3) Cr/NC/RP
HIST 798. Special Study (1-3) Cr/NC/RP

Political Science Courses (POL S)
POL S 655. Seminar in General Comparative Political Systems (3)*
POL S 661. Seminar in the Political Systems of the Developing Nations (3)*
POL S 667. Seminar in Latin American Political Systems (3)
POL S 675. Seminar in International Relations (3)*
POL S 676. Seminar in International Political Economy (3)
POL S 795. Problem Analysis (3)*
POL S 797. Research in Political Science (3) Cr/NC/RP
POL S 798. Special Study (1-3) Cr/NC/RP

Public Administration Course (P A)
P A 798. Special Study (1-3) Cr/NC/RP

Sociology Courses (SOC)
SOC 696. Experimental Topics (3)*
SOC 730. Seminar in Social Institutions (3)
SOC 740. Seminar in Social Psychology: Sociological Approaches (3)
SOC 798. Special Study (1-3) Cr/NC/RP

Spanish Courses (SPAN)
SPAN 601. Seminar in Spanish American Literature (3)
SPAN 602. Seminar in Spanish American Culture, Film, and Society (3)
SPAN 770. Applied Spanish Linguistics for Teachers (3)
SPAN 798. Special Study (1-3) Cr/NC/RP

Television, Film and New Media Course (TFM)
TFM 798. Special Study (1-3) Cr/NC/RP

Women's Studies Courses (WMNST)
WMNST 601. Foundations of Feminist Scholarship (3)
WMNST 602. Seminar: Methods of Inquiry in Women's Studies (3)
WMNST 603. Seminar: Advanced Feminist Theory (3)
WMNST 604. Seminar: Gender, Culture, and Representation (3)
WMNST 605. Seminar: Women, Relationships, and Social Policy (3)
WMNST 696. Selected Topics in Women's Studies (3-6)*
WMNST 701. Seminar in Women's Studies (3)*
WMNST 798. Special Study (1-3) Cr/NC/RP

*Acceptable when of relevant content.
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) TOEFL score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).

**Master of Arts in Liberal Arts and Sciences**

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

Master of Arts in Liberal Arts and Sciences
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-8137

(1) Statement of purpose essay;

(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.
4. 15 units of electives selected with approval of the MALAS director.
All programs must be approved by the MALAS director in consultation with the Graduate Liberal Arts and Sciences Committee.

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 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
Prerequisite: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for Master of Arts degree in Liberal Arts and Sciences.
MALAS 799B. Thesis or Project Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.
Registration required in any semester or term following assignment of RP in MALAS 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.
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 Interim
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-Juian 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 curricula 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, linguistic and computer; Hebrew, Arabic, and Russian
- **Soonja Choi** – Psycholinguistics, first and second language acquisition, cognition and language, ESL, materials development; Korean, French
- **Eniko Csomay** – ESL, corpus linguistics, discourse analysis, language variation, classroom discourse, research methods
- **Thomas S. Donahue** – American dialectology, sociolinguistics, historical linguistics; Old English, Middle English
- **Jean Mark Gawron** – Computational linguistics (parsing, pragmatic narrowing, machine translation); semantics (quantification, anaphora, comparatives, lexical semantics)
- **Yoshiko Higurashi** – Phonology, accent and intonation, syllable structure, speech pathology, intercultural communication, Japanese language teaching
- **Jeffrey P. Kaplan** – Syntax, semantics, pragmatics, discourse, language and law; Swahili
- **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
- **Charlotte Webb** – Phonology, second Language acquisition, sociolinguistics; Spanish, Chinese, Lapp
- **Ruey-Juian Regina Wu** – Conversation analysis, pragmatics, and functional linguistics, with particular emphasis on Mandarin Chinese; language assessment; teaching methodologies, and language pedagogy
- **Zheng-sheng Zhang** – Chinese language structure (semantics, pragmatics, discourse analysis, dialects). Language pedagogy. Technology for language teaching

Admission to Graduate Study
In addition to meeting the requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin, the student must have a Bachelor of Arts degree in linguistics or a related field that would demonstrate adequate preparation for the program.

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

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Linguistics and Asian/Middle East Languages.

Graduate Admissions

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

**Graduate Admissions**

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

(1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;
Note:
- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

(2) GRE scores (http://www.ets.org, SDSU institution code 4682): All students are required to have GRE scores of 1050 or better on the combined verbal/quantitative portions of the test (with a minimum of 500 on each part).

(3) TOEFL score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682): Students who have a B.A. from a university where English is not the primary medium of instruction are required to have TOEFL scores of 570 or better. The TWE (Test of Written English) is also required, and will primarily be used to advise students regarding their program of courses.

Department of Linguistics and Asian/Middle Eastern Languages

The following materials should be mailed or delivered to:
Department of Linguistics and Asian/Middle Eastern Languages (EBA-334)
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7727

(1) A statement of purpose (250-500 words) which demonstrates an understanding of the SDSU program and which show interest in an area of research that is within the department's scope 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 admission requirements, contact Yasmine Panahi at ypahani@mail.sdsu.edu

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 including Linguistics 622 and 795. A minimum of 15 of the units taken must be from 600- or 700-level courses.

Students selecting the General Linguistics specialization must complete Linguistics 621 and six units from the following: Linguistics 610, 620, 640, 651, 654, 660, 696 (with general linguistics content).

Students selecting the TESOL/Applied Linguistics specialization must complete either Linguistics 521 or 621. Linguistics 652, and at least six units from the following: Linguistics 623, 650, 653, and 655. An internship, Linguistics 740, is required of all students selecting this specialization who have not taught ESL previously.

Students selecting the Computational Linguistics specialization must complete Linguistics 581 or Computer Science 581, Linguistics 582, either 521 or 621, and six units selected from Linguistics 571, 596 (when offered with computational linguistics content), 620, 654, 681, 696 (when offered with computational linguistics content). The graduate electives should be approved by the graduate adviser. A prerequisite to the Computational Linguistics specialization is completion of Linguistics 570 or equivalent.

Students selecting one specialization may enroll in courses from the other specialization as electives.

With the approval of the graduate adviser, a maximum of six units selected from the following courses will be accepted for graduate credit in linguistics: Anthropology 604; 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, 795.

Plan A or Plan B

With approval of the graduate adviser, a student may choose either Plan A, the normal option which requires a thesis, or in special circumstances and with the prior approval of the graduate adviser, Plan B, which requires a written comprehensive examination. Plan A students must select a committee of three faculty, two of whom are from the department, to supervise the thesis. In consultation with the graduate adviser, students select one of two options upon approval of an official program and advancement to candidacy.

Advanced Certificate in Teaching English as a Second or Foreign Language (TESL/TEFL)

(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, 651, 654, and 795. Students must obtain a 3.0 GPA overall in the courses for the advanced certificate. The prerequisite to the Advanced Certificate is the Basic Certificate or its equivalent. A student's entire program comprising Basic and Advanced Certificates must include at least one course from Linguistics 530, 622, and 623. Under certain circumstances comparable courses taken at other institutions may count toward the certificate. Such courses must be evaluated and approved by the certificate advisor. 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 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 520. Fundamentals of Linguistics (3)  
Prerequisite: Upper division standing.  
Principles of modern linguistics, with attention to English grammar (syntax, morphology, phonology). Language change, dialects, socio-linguistics, psycholinguistics, language acquisition.

LING 521. Phonology (3)  
Prerequisite: Linguistics 420 or 520.  
Theoretical principles of transformational-generative phonology.

LING 522. Syntax (3)  
Prerequisite: Linguistics 420 or 520.  
Theoretical principles of transformational-generative syntax.

LING 523. Morphology (3)  
Prerequisite: Linguistics 420 or 520.  
Theoretical principles of words structure, including inflection, derivation, and compounding; organization of the lexicon; structure of inflectional paradigms; morphophonological and morphosyntactic alterations; and computational applications.

LING 524. American Dialectology (3)  
Prerequisite: Upper division standing.  

LING 525. Semantics and Pragmatics (3)  
Prerequisite: Linguistics 420 or 520.  
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 programs for speech recognition.

LING 530. English Grammar (3)  
Prerequisite: Six upper division units in linguistics.  
Advanced study of formal syntactic theory: systematic analysis of the interaction of sequences of language with real world context in which they are used.

LING 550. Theory and Practice of English as a Second Language (3)  
Prerequisite: Linguistics 420 or 520.  
The nature of language learning; evaluation of techniques and materials for the teaching of English as a second language.

LING 551. Sociolinguistics (3)  
Prerequisite: A course in introductory linguistics.  
Investigation of the correlation of social structure and linguistic behavior.

LING 552. Psycholinguistics (3)  
Prerequisite: Linguistics 420 or 520.  
Psychological and mental processes related to comprehension, production, perception, and acquisition of language in adults and children.

LING 553. Bilingualism (3)  
Prerequisite: Linguistics 420 or 520 or Speech, Language, and Hearing Sciences 300.  
Bilingual societies; language choice by bilinguals; bilingual language acquisition; effects of bilingualism on language structure and use.

LING 554. Child Language Acquisition (3)  
Prerequisite: Linguistics 420 or 520.  
Theories and research methods in child language acquisition; quantitative and qualitative analyses of data at various levels of grammar (morphology, 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: Two linguistics courses.  
Practical introduction to creation of text corpora and introduction to Perl. Tokenizing, part-of-speech tagging, and lemmatizing (stemming) large corpora. Writing of Perl programs required.

LING 557. Mathematical Linguistics (3)  
Prerequisite: Two linguistics courses.  
Practical introduction to creation of text corpora and introduction to Perl. Tokenizing, part-of-speech tagging, and lemmatizing (stemming) large corpora. Writing of Perl programs required.

LING 558. Computational Linguistics (3)  
Prerequisite: Linguistics 507 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 computational linguistics.

LING 559. 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.

LING 560. Topics in Historical Linguistics (3)  
Prerequisite: Three upper division units in linguistics, preferably Linguistics 410, 520, or 521.  
Methods and principles used in historical study of language; processes of language change in phonology, syntax, and semantics; reconstruction of language families; development of writing. Analysis of Indo-European, Old English, and Middle English. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

LING 596. Advanced Formal Syntax (3)  
Prerequisite: Linguistics 522.  
Advanced study of formal syntactic theory.

LING 601. Advanced English Phonology (3)  
Prerequisite: Linguistics 521.  

LING 622. Discourse and Syntax (3)  
Prerequisite: Linguistics 522.  
Functional and discourse-oriented approaches to syntax and syntactic approaches to discourse.

LING 623. Immigrant Languages (3)  
Prerequisite: Linguistics 420 or 520.  
Contrastive structure of selected languages representing significant immigrant populations in San Diego; emphasis on phonological, orthographic, morphological, lexical and syntactic features.
LING 640. Field Methods in Linguistics (3)
Prerequisites: Linguistics 521 and credit or concurrent registration in Linguistics 622.
Principles and techniques of linguistic analysis working directly with native informants, including phonemic, grammatical, and syntactic analysis and text collection and interpretation.

LING 650. Materials Development in Applied Linguistics (3)
Prerequisite: Linguistics 550.
Materials development and adaptation for teaching English as a second language and foreign language.

LING 651. Sociology of Language (3)
Prerequisite: Linguistics 551.
Public and private reasons for planned language behavior. Creoles, personal speech interaction patterns, bilingualism, cultural diversity in language use, social-theoretical background, language planning, and social uses of sexism in language.

LING 652. Second Language Acquisition (3)
Prerequisites: Linguistics 452, 552 or 554, and 550.
Analyses of theories of second language acquisition; theoretical and empirical bases of current second language teaching methodologies.

LING 653. ESL Reading and Writing (3)
Prerequisite: Linguistics 550.
Application of discourse and reading theory to the teaching and testing of ESL reading and writing. Issues of coherence, process-product, genre studies.

LING 654. Language and Cognition (3)
Prerequisite: Linguistics 552.
Language production, comprehension, and acquisition, as these relate to human cognition.

LING 655. English for Specific Purposes and Content-Based Instruction (3)
Prerequisites: Linguistics 420 or 520, and 550.
Theory, practice, and history of these two related approaches to ESL/EFL.

LING 656. Quantitative Research Methods in Language Studies (3)
Prerequisite: Linguistics 420 or 520.
Research design and quantitative research methods for linguistic applications. Critical evaluation of published research studies; empirical research project.

LING 657. Foundations of Language Assessment (3)
Prerequisites: Linguistics 550; and Linguistics 650, 652 or 653.
Fundamental principles and goals of language assessment and language assessment research: characteristics of assessment methods; analyzing test tasks; designing test items; describing test scores; approaches to estimating reliability; validity and validation; authenticity and impact.

LING 660. History of Linguistics (3)
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 & Marketing
Refer to “Business Administration” in this section of the bulletin.
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
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
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
J. Carmelo Interlando, Ph.D., Assistant Professor of Mathematics

Mathematics Education
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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)
Andrew G. Izsák, Ph.D., Associate Professor of Mathematics
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) TOEFL score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part 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, 620A, 620B, 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://nlil.g.sdsu.edu/masters](http://nlil.g.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 511. Projective Geometry (3)**

Prerequisite: Mathematics 254.

Geometry emphasizing relationships between points, lines, and conics. Euclidean geometry and some non-Euclidean geometries as special cases of projective geometry.

**MATH 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.

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)
Prerequisites: Mathematics 254 or 342A; and Computer Science 106 or 107 or 205.
Solution of equations of one variable, direct methods in numerical linear algebra, least squares approximation, interpolation and uniform approximation, quadrature.

MATH 542. Introduction to Numerical Solutions of Differential Equations (3)
Prerequisites: Mathematics 337 and 541.

MATH 543. Numerical Matrix Analysis (3)
Prerequisite: Mathematics 541.

MATH 544. Computational Finance (3)
Prerequisite: Statistics 550 or 551A.

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, MacWilliam's identities and the linear programming bound. Probabilistic decoding of convolutional codes, low-density parity-check codes and turbo codes.

MATH 626. Cryptography (3)
Prerequisites: Mathematics 521A and 522.
MATH 627A. Modern Algebra I (3)
Prerequisite: Mathematics 521B.
Group theory, including isomorphism theorems, permutation groups, and simplicity of An, 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.

MATH 635. Pattern Formation (3)
Prerequisites: Mathematics 337 or 531 and Mathematics 254 or 342A, 342B.

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.

MATH 639. Nonlinear Waves (3)
Prerequisite: Mathematics 531 or 537.

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.

MATH 693B. Advanced Numerical Analysis (3)
Prerequisites: Mathematics 531, 537, and 693A.

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: Completion or concurrent enrollment in degree program courses.
Preparation of a project or thesis for the master's degree. 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: 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 799C. Comprehensive Examination 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 Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>Joanne Lobato, Ph.D.</td>
<td>Professor of Mathematics</td>
</tr>
<tr>
<td>Nadine S. Bezuk, Ph.D.</td>
<td>Professor of Teacher Education</td>
</tr>
<tr>
<td>Kathleen M. Fisher, Ph.D.</td>
<td>Professor of Biology</td>
</tr>
<tr>
<td>Fred M. Goldberg, Ph.D.</td>
<td>Professor of Physics</td>
</tr>
<tr>
<td>Cheryl L. Mason, Ph.D.</td>
<td>Professor of Teacher Education</td>
</tr>
<tr>
<td>B. Ricardo Nemirovsky, Ph.D.</td>
<td>Professor of Mathematics</td>
</tr>
<tr>
<td>Walter C. Oechel, Ph.D.</td>
<td>Distinguished Professor of Biology</td>
</tr>
<tr>
<td>Randolph A. Philipp, Ph.D.</td>
<td>Professor of Teacher Education</td>
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<tr>
<td>Chris L. Rasmussen, Ph.D.</td>
<td>Professor of Mathematics</td>
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<tr>
<td>Stephen K. Reed, Ph.D.</td>
<td>Professor of Psychology</td>
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<tr>
<td>Alberto J. Rodríguez, Ph.D.</td>
<td>Professor of Policy Studies in Language and Cross-Cultural Education</td>
</tr>
<tr>
<td>Janet S. Bowers, Ph.D.</td>
<td>Associate Professor of Mathematics (M.A.T.S. Graduate Adviser)</td>
</tr>
<tr>
<td>Alexander W. Chizhik, Ph.D.</td>
<td>Associate Professor of Teacher Education (Ph.D. Graduate Advisor)</td>
</tr>
<tr>
<td>Andrew G. Izsák, Ph.D.</td>
<td>Associate Professor of Mathematics</td>
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<td>Associate Professor of Teacher Education</td>
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<td>Susan D. Nickerson, Ph.D.</td>
<td>Associate Professor of Mathematics</td>
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<tr>
<td>Rafaela M. Santa Cruz, Ph.D.</td>
<td>Associate Professor of Teacher Education</td>
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<tr>
<td>Joanne Lobato, Ph.D.</td>
<td>Assistant Professor of Psychology</td>
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<td>Jessica Pierson, Ph.D.</td>
<td>Assistant Professor of Teacher Education</td>
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<tr>
<td>Meredith Houle, Ph.D.</td>
<td>Assistant Professor of Teacher Education</td>
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<tr>
<td>Donna Ross, Ph.D.</td>
<td>Associate Professor of Teacher Education</td>
</tr>
<tr>
<td>Kathy S. Williams, Ph.D.</td>
<td>Associate Professor of Biology</td>
</tr>
</tbody>
</table>

### Committee for Mathematics Education

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Nadine S. Bezuk, Ph.D.</td>
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### 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 advisor; 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 advisor. 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 advisor; 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 advisor. 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 advisor, select three courses from the following:

   PLC 553 Language Assessment and Evaluation in Multicultural Settings (3)
   PLC 601 Language Policies and Practices (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: Alexander W. Chizhik
Staff Adviser: Deb Escamilla
Doctoral Program Members: Bezuk, Bowers, Chizhik, Fisher, Goldberg, Houle, Izsák, 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: Kelly Kasperlain
Doctoral Program Members: Alac, Appelbaum, Barner, Cole, Churchland, Harel, Heyman, Magde, Mehlan, Núñez, Rabin, Remmel, Sawrey, Wienhausen

Doctoral Program Members: Bezuk, Bowers, Chizhik, Fisher, Goldberg, Houle, Izsák, Jacobs, Lamb, Lobato, Mason, Nemirovsky, Nickerson, Oechel, Philipp, Pierson, Rasmussen, Reed, Rodriguez, Ross, Unsworth, Santa Cruz, Williams

Graduate School of Extended Studies
Doctoral Program Members: Alac, Appelbaum, Barner, Cole, Churchland, Harel, Heyman, Magde, Mehlan, Núñez, Rabin, Remmel, Sawrey, 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](http://www.csumentor.edu).

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](http://www.ets.org), SDSU institution code 4682);

(3) TOEFL score, if medium of instruction was in a language other than English ([http://www.ets.org](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/msed/crmse_app02.doc](http://www.sci.sdsu.edu/CRMSE/msed/crmse_app02.doc));

(2) Mathematics and Science Education recommendation form as cover sheet ([http://www.sci.sdsu.edu/CRMSE/msed/Recommend_Form-CoS.doc](http://www.sci.sdsu.edu/CRMSE/msed/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.


(3) Mathematics and Science: Graduate level courses in biology, chemistry, mathematics, or physics.

(4) Teaching Experience: An option for students who have not yet had teaching experiences at both the K-12 and college levels is to take a second teaching practicum.

(5) Other. Other types of courses (at the graduate or upper division undergraduate level) can be approved by the advisers if they contribute to a coherent program.

G. Two doctoral research courses:

SDSU: MSE 830 and
SDSU: MSE 899 or UCSD: MSED 299.

Beyond these requirements, no specified number of courses is required for the doctoral degree. It is expected, however, that all the doctoral students will supplement the requirements with electives that contribute to individual career objectives.

Additional Requirements for Students Entering with a Master’s Degree in Mathematics Education. Students who are admitted into the doctoral program with a master’s degree in mathematics education will increase the breadth and depth of their mathematical knowledge by fulfilling the requirements specified for Option A or Option B.
Option A.
UCSD: MATH 240A, 240B, 240C and
Pass the UCSD comprehensive examination on analysis at the master’s level and
One graduate algebra course: UCSD: MATH 200A or SDSU:
MATH 627A or 623. MATH 623 can only be selected if the student has already taken a graduate level abstract algebra course.

Option B.
Select two of SDSU: MATH 627A, 627B, 623, and
Pass the SDSU comprehensive examination on algebra at the master’s level and
UCSD: MATH 240A

Whether the student selects Option A or Option B, the year-long sequence in algebra or analysis must be taken in Year 1 of the doctoral program. All of the requirements for Option A or Option B must be completed prior to the second year examination; however, students are strongly encouraged to fulfill all of the requirements in Year 1. A grade of B or better must be earned in each course.

Examinations. Students in the doctoral program will be evaluated at the following levels:

1. First Year Evaluation. The student’s ability to master graduate level course material may be assessed after completion of no more than 24 semester units of coursework. This evaluation may take place not later than the third semester of the student’s enrollment in the program. The evaluation will be based on the student’s performance in coursework and on indicated research competence, and it will be undertaken by the student’s advisory committee together with instructors from the student's first year courses.

2. Comprehensive Examinations. At the end of the second year, the student will take a written comprehensive examination in general cognition and an oral examination on issues of learning pertinent to the student’s area of specialization.

3. Oral Examination. During the third year in the program, the student will make an oral presentation to the dissertation committee to accompany a written proposal for the doctoral thesis. The student will be questioned on both the topic of the investigation and on the proposed research methodology. Upon successful completion of this presentation, the student will be recommended for advancement to candidacy for the doctoral degree.

4. Dissertation Defense. After completion of the dissertation, the student 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 creden-tialed 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).

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):
2. Six units to include Mathematics Education 571 and 572.

Requirements for the upper elementary mathematics specialist certificate (12 units):
2. Six units to include Mathematics Education 573 and 574.

Students must pass all courses with C/Open 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.

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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.  

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 instruction.

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.

MSE 802. Orientation Practicum (1-3) Cr/NC
Prerequisite: Admission to doctoral program in Mathematics and Science Education.

MSE 805. Supervised Teaching of Teacher Preparation Courses (3) Cr/NC/RP
Prerequisite: Admission to doctoral program in Mathematics and Science Education.

MSE 806. Supervised School Practicum (3) Cr/NC/RP
Prerequisite: Admission to doctoral program in Mathematics and Science Education.

MSE 807. Specially Designed Practicum (3) Cr/NC/RP
Prerequisite: Admission to doctoral program in Mathematics and Science Education.

MSE 810. Seminar in Research Design (3)
Prerequisites: Admission to doctoral program in Mathematics and Science Education; Psychology 670A, and consent of instructor.

MSE 820. Research Project (3-6) Cr/NC/RP
Prerequisite: Admission to doctoral program in Mathematics and Science Education.

MSE 897. Doctoral Special Study (1-8) Cr/NC/RP
Prerequisites: An officially constituted doctoral committee and advancement to candidacy.

MSE 898. Doctoral Dissertation (1-15) Cr/NC/RP
Prerequisites: An officially constituted dissertation committee and advancement to candidacy.

MSE 899. Doctoral Research (1-15) Cr/NC/RP
Prerequisite: Admission to doctoral program in Mathematics and Science Education.

MSE 905. Supervised Teaching of Teacher Preparation Courses (3) Cr/NC/RP
Prerequisite: Admission to doctoral program in Mathematics and Science Education.

MSE 906. Supervised School Practicum (3) Cr/NC/RP
Prerequisite: Admission to doctoral program in Mathematics and Science Education.

MSE 907. Specially Designed Practicum (3) Cr/NC/RP
Prerequisite: Admission to doctoral program in Mathematics and Science Education.

MSE 910. Seminar in Research Design (3)
Prerequisites: Admission to doctoral program in Mathematics and Science Education; Psychology 670A, and consent of instructor.

MSE 920. Research Project (3-6) Cr/NC/RP
Prerequisite: Admission to doctoral program in Mathematics and Science Education.

MSE 997. Doctoral Special Study (1-8) Cr/NC/RP
Prerequisites: An officially constituted doctoral committee and advancement to candidacy.

MSE 998. Doctoral Dissertation (1-15) Cr/NC/RP
Prerequisites: An officially constituted dissertation committee and advancement to candidacy.

MSE 999. Doctoral Research (1-15) Cr/NC/RP
Prerequisite: Admission to doctoral program in Mathematics and Science Education.

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)

Referto 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. (Formerly numbered Mathematics 281A.)

MATH 501B. Reasoning: Rational Numbers and Real Number Systems (1)
Prerequisites: Teaching credential and consent of instructor.
Rational numbers and structure of real number system, to include meanings and models for fractions with attention to operations on rational numbers. (Formerly numbered Mathematics 281A.)

MATH 502A. Reasoning: Geometric Shapes (1)
Prerequisites: Teaching credential and consent of instructor.
Geometric reasoning about quantities and their measurement and relationships among quadrilaterals, symmetries and transformations in the plane. (Formerly numbered Mathematics 281B.)

MATH 502B. Reasoning: Measurement (1)
Prerequisites: Teaching credential and consent of instructor.
Key ideas of measurement, development of area formulas for two-dimensional figures, size changes, and similarity. (Formerly numbered Mathematics 281B.)

MATH 503A. Reasoning: Foundations of Quantitative Thinking (1)
Prerequisites: Teaching credential and consent of instructor.
Reasoning about quantities and their measurement and relationships among these quantities, to include representations of these relationships. Understand situations that call for additive or multiplicative reasoning; important role of these ideas in development of quantitative reasoning skills in primary grades. (Formerly numbered Mathematics 381.)

MATH 503B. Reasoning: Foundations of Algebraic Thinking (1)
Prerequisites: Teaching credential and consent of instructor.
Pattern searching, equivalences, making and justifying conjectures. Preparation for teaching California required K-12 algebraic reasoning strand. (Formerly numbered Mathematics 382.)
MATH 504A. Reasoning: Quantities and Mathematical Relationships (1)
Prerequisites: Teaching credential and consent of instructor.
Reasoning about measurable characteristics in problem context, and relationships among these measurements. Additive, multiplicative reasoning, and proportional reasoning in middle grades. (Formerly numbered Mathematics 383.)

MATH 504B. Reasoning: Algebra and Nature of Change (1)
Prerequisites: Teaching credential and consent of instructor.
Pattern searching, generalizing, graphing to represent quantitative relationships, and role of these topics in preparing elementary and middle school students for algebra. (Formerly numbered Mathematics 384.)

MATH 505A. Reasoning: Probability (1)
Prerequisites: Teaching credential and consent of instructor.
Probabilistic situations, theoretical probabilities, and expected values. (Formerly numbered Mathematics 386.)

MATH 505B. Reasoning: Statistics (1)
Prerequisites: Teaching credential and consent of instructor.
Gathering, representing, and interpreting data sets, measures of central tendency, and characteristics of normal distributions. (Formerly numbered Mathematics 385.)

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 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 507B. Functions and Study of Change II (3)
Prerequisites: Mathematics 507A, practicing teachers with valid teaching credential, and consent of instructor.
Arithmetic foundations for algebra in the middle grades, with a focus on real number system, ratios and proportional reasoning, number theory and proof.

GRADUATE COURSES

MATH 600. Geometrical Systems (3)
Prerequisites: Mathematics 521A and an upper division course in geometry.
Ordered and affine geometries, decompositions, dilations. 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.

Mechanical Engineering: Refer to “Engineering” in this section of the bulletin.
Molecular Biology: Refer to “Biology” in this section of the bulletin.
Music and Dance
In the College of Professional Studies and Fine Arts

OFFICE: Music 112
TELEPHONE: 619-594-6031 / FAX: 619-594-1692
E-MAIL: music.dance@sdsu.edu

Faculty

Music
Donna M. Conaty, M.M., Professor of Music, Director of School
Karen J. Follingstad, D.M.A., Professor of Music
Richard A. Heizer, 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
Felix Olschofka, M.M., Associate Professor of Music
Richard Thompson, M.M., Associate Professor of Music
Todd Rewoldt, D.M.A., Assistant 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
Cello: Zhao
Clarinet: Liebowitz
Classical Guitar: Benedetti, Romero, Svoboda, Wetzel
Composition: Dutton, Waters
Double Bass: Kurtz, Magnusson
Euphonium: Dutton
Flute: Martchev, P.
Harp: Mashkovtseva
Horn: Kitelinger
Jazz Guitar: Boss
Jazz Studies: Heizer, Thompson, Yeager
Non-Western Instruments: Specialists from specific cultures as available each semester
Oboe: Conaty
Opera: Evans-O’Connor
Percussion: Cohen, Flood, Holguin
Piano: Follingstad, Kolar
Saxophone: Rewoldt, Rekevics
Trombone: Covington, Fellinger, Pollack
Trumpet: Wilds
Tuba: Dutton
Viola: Maril
Violin: Olschofka
Voice: Mackenzie, Nikkel, Toral, Tweed

Dance
Melissa Nunn, M.A., Professor of Dance
Patricia R. Sandback, M.F.A., Professor of Dance
Joseph W. Alter, M.F.A., Associate Professor of Dance
Graham Hempel, M.A., Associate Professor of Dance
Leslie Seilers, M.F.A., Assistant Professor of Dance

Scholarships
Information on music scholarships may be obtained by writing to the chair, Music Scholarship Committee, School of Music and Dance, San Diego State University.

General Information
The School of Music and Dance offers graduate study leading to the Master of Arts degree in music and the Master of Music degree. The school also offers advanced coursework in dance which may be used toward fulfilling advanced degree requirements 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.

Specializations of the music faculty include:
Composition and theory: Aesthetics, electro-acoustic composition, comprehensive musicianship, contemporary music, relationships among the arts.
Conducting: Literature and score analysis, rehearsal techniques, general preparation and performance in both the choral and instrumental areas.
Ethnomusicology: African, African-American, American folk, East Asian, European, South Asian, and Southeast Asian musics. Students may elect research in other areas with approval of the faculty adviser.
Musicology: With the approval of the faculty, students may select a topic in medieval, renaissance, baroque, classical, romantic, twentieth century music, or American music.
Performance: Performance studies are offered on all instruments and voice.
Piano pedagogy: Preparation of the teacher of the child, adolescent, or adult students.

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 TOEFL (Test of English as a Foreign Language) score of 550. Foreign applicants taking the Computer-Based Test of English as a Foreign Language (CBTTOEFL) 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](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](http://www.ets.org) SDSU institution code 4682);
(3) TOEFL or the CBTTOEFL score for foreign students, if instruction was in a language other than English ([http://www.ets.org](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.

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) a one to two-page statement of objectives that explains 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) three letters of recommendation from individuals who are in a position to comment on the student’s potential to succeed in graduate work; and (c) a 10 to12-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.

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, 613 or 614; 652, 653 or 654, and 690.

Plan A is required of those students electing musicology. Students are required to enroll in Music 799A, Thesis or Project, and to pass a final oral comprehensive examination on the thesis.

Students whose field is ethnomusicology or piano pedagogy may choose either Plan A or Plan B. Students in Plan B are required to enroll in Music 766, Graduate Lecture Recital. A final oral comprehensive examination and written document are required of all students electing Plan B.

Master of Arts candidates in ethnomusicology and musicology must have a reading ability in an approved foreign language.

In addition to the requirements stated above, students must complete requirements in the selected specialization.

Ethnomusicology (SIMS Code: 665317)
Core: Music 612, 654, 690.
Program: Music 561 (6 units), 610, 615 (6 units); 766 (Plan B) or 799A (Plan A).
Electives: Three units.

Musicology (SIMS Code: 665335)
Core: Music 613, 652, 690.
Program: Music 611; three additional units from Music 652 or 653; Music 654; six units selected from Music 554, 610, 615; and 799A.
Electives: Three units selected from 500- or 600-level 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, 615, 654; and 799A.
Electives: Three units.
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, 614 or 615; 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 554, 570-589 (vocal majors must choose opera) (3 units), 651 (9 units); 767. Electives: Four units.

A final oral comprehensive examination is required for all Master of Music candidates.

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), 569-589 (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 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 cross-cultural 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 public 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 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 596, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

MUSIC 598. Seminar in Music Theory (3) 
Prerequisite: Admission to the graduate program.
Synthesis of theoretical forms, concepts, and practices required for full candidacy in the graduate music program. Not applicable to the master's degree in music.

GRADUATE COURSES

MUSIC 610. Seminar in Ethnomusicology (3) 
Prerequisite: Completion of undergraduate comprehensive music literature core.
Ethnomusicology with emphasis on its relationship to research, field work, transportation and analysis, classification of instruments and musical styles, and cultural context.

MUSIC 611. Seminar in Musicology (3) 
Systematic study of music based upon application of scientific investigation, philosophical speculation, modern historiography, and related academic disciplines in humanities and social sciences.

MUSIC 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 615. Seminar in Music Theory: Ancient and Modern Notational Systems of the World (3)
Current advanced analytic techniques in ancient and modern world music through the study of diverse notational systems.

MUSIC 641. Piano Pedagogy: Adolescent to Adult (3)
Two lectures and three hours of laboratory.
Prerequisite: 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.
A. Keyboard  H. Harp
B. Voice  I. Jazz Instrument
C. Woodwind  J. Medieval/Renaissance Instrument
D. Brass  K. Non-Western Instrument
E. Percussion  L. Composition
F. Strings  M. Conducting
G. 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 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.
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 COURSES
N SCI 600. Seminar in Science Education (3)
An intensive study in advanced science education. May be repeated with new content. See Class Schedule for specific content.

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.
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 in labor and delivery. 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) TOEFL or IELTS score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).

School of Nursing

The following materials should be mailed or delivered to:

School of Nursing
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4158
(1) Departmental application to the School of Nursing available at http://nursing.sdsu.edu/programs-ms-application.php;
(2) Submit three letters of recommendation attesting to capability to do graduate work in nursing;
(3) Submit a personal statement;
(4) Copy of California Registered Nurse license.

Conditional Admission

Students who do not satisfy all admission requirements to the School of Nursing may, with special consideration, be admitted in a conditionally classified graduate standing. At the deadline date specified on the conditional form (at time of acceptance), the faculty of the School of Nursing shall recommend to the graduate dean that the student:
1. Be disqualified from further study in the program, or
2. Be continued in conditionally classified status, or
3. Be granted full graduate classified standing.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part 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 39-57 unit course of study. The program includes:
1. Twelve units of core courses to include Nursing 604A, 604B, 608, and 684.
2. A minimum of 18-45 units of graduate courses in the area of concentration or specialization.
3. Zero to six units of electives.

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 California Women's Health Nurse Practitioner and School Nursing and to the Specialization in School Nursing.

Core Courses

<table>
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<tr>
<th>Course</th>
<th>Units</th>
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<tr>
<td>NURS 604A</td>
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<tr>
<td>NURS 604B</td>
<td>3</td>
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<td>NURS 608</td>
<td>3</td>
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<td>NURS 684</td>
<td>3</td>
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<td><strong>Total</strong></td>
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</tbody>
</table>

Area of Concentration Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>P H 601</td>
<td></td>
</tr>
<tr>
<td>NURS 631</td>
<td></td>
</tr>
<tr>
<td>NURS 632</td>
<td></td>
</tr>
<tr>
<td>NURS 732</td>
<td></td>
</tr>
<tr>
<td>NURS 736</td>
<td></td>
</tr>
<tr>
<td>NURS 799A</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Units</strong></td>
<td><strong>39</strong></td>
</tr>
</tbody>
</table>

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) 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

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 604A</td>
<td>3</td>
</tr>
<tr>
<td>NURS 604B</td>
<td>3</td>
</tr>
<tr>
<td>NURS 608</td>
<td>3</td>
</tr>
<tr>
<td>NURS 684</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
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</tbody>
</table>

Community Health Nursing Concentration Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 632</td>
<td>3</td>
</tr>
<tr>
<td>NURS 799A</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Units</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

Specialization Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 501</td>
<td>3</td>
</tr>
<tr>
<td>NURS 501L</td>
<td>3</td>
</tr>
<tr>
<td>NURS 610</td>
<td>3</td>
</tr>
<tr>
<td>NURS 636</td>
<td>3</td>
</tr>
<tr>
<td>NURS 637</td>
<td>2</td>
</tr>
<tr>
<td>NURS 638</td>
<td>2</td>
</tr>
<tr>
<td>NURS 639</td>
<td>6</td>
</tr>
<tr>
<td>NURS 654</td>
<td>3</td>
</tr>
<tr>
<td>NURS 658</td>
<td>3</td>
</tr>
<tr>
<td>NURS 744</td>
<td>3</td>
</tr>
<tr>
<td>NURS 745</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Units</strong></td>
<td><strong>36</strong></td>
</tr>
</tbody>
</table>

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**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 604A</td>
<td>Theoretical and Research Bases of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 604B</td>
<td>Theoretical and Research Bases of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 608</td>
<td>Nursing in the Health Care System</td>
<td>3</td>
</tr>
<tr>
<td>NURS 684</td>
<td>Information Systems for Nursing</td>
<td>3</td>
</tr>
</tbody>
</table>

**Community Health Nursing Concentration Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 632</td>
<td>Community Health Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 799A</td>
<td>Thesis OR NURS 798 (Plan B)</td>
<td>3</td>
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</table>

**Specialization Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 501</td>
<td>Advanced Health Assessment and Health Promotion</td>
<td>3</td>
</tr>
<tr>
<td>NURS 501L</td>
<td>Advanced Health Assessment and Health Promotion Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>NURS 610</td>
<td>Pathophysiology in Adults and Elderly</td>
<td>3</td>
</tr>
<tr>
<td>NURS 636</td>
<td>Women’s Health Assessment and Management I</td>
<td>3</td>
</tr>
<tr>
<td>NURS 637</td>
<td>Women’s Health/Nurse-Midwifery</td>
<td>3</td>
</tr>
</tbody>
</table>

**Specialization Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 639</td>
<td>Clinical Practicum I</td>
<td>2</td>
</tr>
<tr>
<td>NURS 639</td>
<td>Clinical Practicum II</td>
<td>3</td>
</tr>
<tr>
<td>NURS 654</td>
<td>Advanced Practice Nursing: Primary Care I</td>
<td>3</td>
</tr>
<tr>
<td>NURS 658</td>
<td>Clinical Pharmacology for Advanced Practice Nursing</td>
<td>3</td>
</tr>
</tbody>
</table>

**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 audiology course selected with approval of adviser. Required courses are as follows:

**Core Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 604A</td>
<td>Theoretical and Research Bases of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 604B</td>
<td>Theoretical and Research Bases of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 608</td>
<td>Nursing in the Health Care System</td>
<td>3</td>
</tr>
<tr>
<td>NURS 684</td>
<td>Information Systems for Nursing</td>
<td>3</td>
</tr>
</tbody>
</table>

**Community Health Concentration Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 631</td>
<td>Community Health Practicum</td>
<td>3</td>
</tr>
<tr>
<td>NURS 632</td>
<td>Community Health Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 799A</td>
<td>Thesis OR NURS 798 (Plan B)</td>
<td>3</td>
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</tbody>
</table>

**Specialization Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 601</td>
<td>Assessment and Health Promotion of Children and Adolescents</td>
<td>4</td>
</tr>
<tr>
<td>NURS 670</td>
<td>School Nursing Management Practices</td>
<td>3</td>
</tr>
<tr>
<td>NURS 672</td>
<td>Primary Health Care of the School Aged Child</td>
<td>3</td>
</tr>
<tr>
<td>NURS 674</td>
<td>Health Education for School Nurses</td>
<td>3</td>
</tr>
<tr>
<td>SPED 500</td>
<td>Human Exceptionality</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective with approval of graduate adviser. 3

Total Units 45
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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 604A</td>
<td>Theoretical and Research Bases of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 604B</td>
<td>Theoretical and Research Bases of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 608</td>
<td>Nursing in the Health Care System</td>
<td>3</td>
</tr>
<tr>
<td>NURS 684</td>
<td>Information Systems for Nursing</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
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</table>

Concentration Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 501</td>
<td>Advanced Health Assessment and Health Promotion</td>
<td>3</td>
</tr>
<tr>
<td>NURS 501L</td>
<td>Advanced Health Assessment and Health Promotion Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>NURS 610</td>
<td>Pathophysiology in Adults and the Elderly</td>
<td>3</td>
</tr>
<tr>
<td>NURS 658</td>
<td>Clinical Pharmacology for Advanced Practice Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 799A</td>
<td>Thesis OR NURS 798</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
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</tbody>
</table>

Specialization Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 622</td>
<td>Quality Improvement and Program Evaluation in Nursing Systems Organizations</td>
<td>3</td>
</tr>
<tr>
<td>NURS 644</td>
<td>Program and Curriculum Development in Nursing Education</td>
<td>3</td>
</tr>
<tr>
<td>NURS 645</td>
<td>Teaching and Learning in Nursing Education</td>
<td>3</td>
</tr>
<tr>
<td>NURS 646</td>
<td>Nursing Education Practicum</td>
<td>3</td>
</tr>
<tr>
<td>NURS 751</td>
<td>Advanced Practice Nursing: Acute/Critical Care Theory and Technology</td>
<td>3</td>
</tr>
<tr>
<td>NURS 753</td>
<td>Advanced Practice Nursing: Acute/Critical Care Practicum</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
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</tr>
</tbody>
</table>

(Nurse Practitioner and Clinical Nurse Specialist Preparation)
(SIMS Code: 554630)

Advanced Practice Nursing of Adults and the Elderly Concentration Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 501</td>
<td>Advanced Health Assessment and Health Promotion</td>
<td>3</td>
</tr>
<tr>
<td>NURS 501L</td>
<td>Advanced Health Assessment and Health Promotion Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>NURS 610</td>
<td>Pathophysiology in Adults and the Elderly</td>
<td>3</td>
</tr>
<tr>
<td>NURS 654</td>
<td>Advanced Practice Nursing: Primary Care I</td>
<td>3</td>
</tr>
<tr>
<td>NURS 655</td>
<td>Advanced Practice Nursing: Primary Care Practicum I</td>
<td>6</td>
</tr>
<tr>
<td>NURS 656</td>
<td>Advanced Practice Nursing: Primary Care Practicum II</td>
<td>3</td>
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<tr>
<td>NURS 657</td>
<td>Advanced Practice Nursing: Primary Care Practicum II</td>
<td>6</td>
</tr>
<tr>
<td>NURS 658</td>
<td>Clinical Pharmacology for Advanced Practice Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 799A</td>
<td>Thesis OR NURS 798</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
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</table>

Area of Specialization Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 751</td>
<td>Advanced Practice Nursing: Acute/Critical Care Theory and Technology</td>
<td>3</td>
</tr>
<tr>
<td>NURS 753</td>
<td>Advanced Practice Nursing: Acute and Critical Care Practicum</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

Nursing Education Concentration
(SIMS Code: 554641)

Graduates of the nursing education concentration will be prepared for positions in academic and/or clinical settings within four areas of specialization: Adult Health, Maternal/Newborn, Nursing Leadership in Health Care Systems, and Pediatric Nursing. Required courses for the concentration are as follows:

Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 604A</td>
<td>Theoretical and Research Bases of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 604B</td>
<td>Theoretical and Research Bases of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 608</td>
<td>Nursing in the Health Care System</td>
<td>3</td>
</tr>
<tr>
<td>NURS 684</td>
<td>Information Systems for Nursing</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
</tr>
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</table>

Area of Concentration Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 644</td>
<td>Program and Curriculum Development in Nursing Education</td>
<td>3</td>
</tr>
<tr>
<td>NURS 645</td>
<td>Teaching and Learning in Nursing Education</td>
<td>3</td>
</tr>
<tr>
<td>NURS 646</td>
<td>Nursing Education Practicum</td>
<td>3</td>
</tr>
<tr>
<td>NURS 799A</td>
<td>Thesis OR NURS 798</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

Advanced Clinical Content (students select one specialization)
1. Adult Health: NURS 501, 501L, 610, 658, 751 (13 units)
2. Maternal/Newborn: NURS 634, 640, 658, 742 (12 units)
3. Nursing Leadership in Health Care Systems: NURS 620, 622, 624, 725 (12 units)
4. 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. Nursing Service Administration: 39 units
4. 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:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 604A</td>
<td>Theoretical and Research Bases of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 604B</td>
<td>Theoretical and Research Bases of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 608</td>
<td>Nursing in the Health Care System</td>
<td>3</td>
</tr>
<tr>
<td>NURS 684</td>
<td>Information Systems for Nursing</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12</td>
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Area of Concentration Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 620</td>
<td>Foundations of Nursing Administration Practice</td>
<td>3</td>
</tr>
<tr>
<td>NURS 622</td>
<td>Quality Improvement and Program Evaluation in</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Nursing Systems Organization</td>
<td></td>
</tr>
<tr>
<td>NURS 624</td>
<td>Nursing Care Systems and Personnel Management</td>
<td>3</td>
</tr>
<tr>
<td>NURS 724</td>
<td>Nursing Systems Administration Practicum</td>
<td>3</td>
</tr>
<tr>
<td>NURS 725</td>
<td>Financial Management in Health Systems</td>
<td>3</td>
</tr>
<tr>
<td>NURS 726</td>
<td>Advanced Nursing Systems Administration Practicum</td>
<td>3</td>
</tr>
<tr>
<td></td>
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</table>

Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 799A</td>
<td>Thesis OR NURS 798 (Plan B)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Total Units 39

School Nurse Services Credential
(Credential Code: 00600)

San Diego State University offers curricula leading to the School Nurse Services Credential. This authorizes the holder to serve as a school nurse. For information concerning the credential, the student is referred to the School of Nursing office, HT-58.

The School Nurse Services Credential has been approved by the Commission on Teacher Credentialing.

All applicants seeking admission to the School Nurse Services Credential program must be admitted to the university and accepted as a classified postbaccalaureate student. Satisfactory completion of the program requires an overall GPA of 3.0 with individual course grades above 2.0.

Standards for Admission

1. Baccalaureate degree in nursing or related field.
2. Current California Registered Nurse License.
3. Required admission and planning interview with program adviser.
4. Have a minimum cumulative grade point average of 3.0 on a 4.0 scale in undergraduate upper division courses.
5. One year experience as a registered nurse within five years of application.
6. Undergraduate community health nursing course.

Program

The following program elements are required of all health services credential candidates:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 601</td>
<td>Assessment and Health Promotion of Children and</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Adolescents</td>
<td></td>
</tr>
<tr>
<td>NURS 631</td>
<td>Community Health Nursing Practicum</td>
<td>3</td>
</tr>
<tr>
<td>NURS 632</td>
<td>Community Health Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 670</td>
<td>School Nursing Management Practices</td>
<td>3</td>
</tr>
<tr>
<td>NURS 672</td>
<td>Primary Health Care of the School-Aged Child</td>
<td>3</td>
</tr>
<tr>
<td>NURS 674</td>
<td>Health Education for School Nurses</td>
<td>3</td>
</tr>
<tr>
<td>SPED 500</td>
<td>Human Exceptionality</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Audiology: Three unit course selected with approval of adviser</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>Elective with approval of graduate adviser</td>
<td>3</td>
</tr>
</tbody>
</table>

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

2. Master's degree in nursing.

Program (12 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>NURS 644</td>
<td>Program and Curriculum Development in Nursing</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Education</td>
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<tr>
<td>NURS 645</td>
<td>Teaching and Learning in Nursing Education</td>
<td>3</td>
</tr>
<tr>
<td>NURS 646</td>
<td>Nursing Education Practicum</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>Graduate level course with education emphasis selected with consent of adviser</td>
<td>3</td>
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</table>
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 596, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES

NURS 601. Assessment and Health Promotion of Children and Adolescents (4)
Three lectures and three hours of laboratory.
Prerequisites: Consent of school health credential advisor or graduate advisor 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 of nursing 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)
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)
Comprehensive assessment and management of ambulatory care for women throughout childbearing cycle. Pregnancy, prenatal care, fetal physiologic 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 woman/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. Credit or concurrent registration in Nursing 630.
Supervised laboratory and clinical experiences providing gynecological, well woman, primary obstetric, postpartum and newborn care for adolescent and adult women throughout the lifespan in diverse clinical settings.
NURS 644. Program and Curriculum Development in Nursing Education (3)
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)
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.
Develops 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 742. Principles of Nurse-Midwifery II (3)
Prerequisites: Nursing 640, 641. Concurrent registration in Nursing 743.
Expands concepts and principles applied to management of pathophysiologic 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 (5)
Prerequisites: Nursing 635. Concurrent registration in Nursing 745.
Theoretical concepts and principles applied to management of pathophysiologic 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.
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
Janet C. Harris, Ph.D., Professor of Exercise and Nutritional Sciences, Director of School
Mark J. Kern, Ph.D., Professor of Exercise and Nutritional Sciences
Larry S. Verity, Ph.D., Professor of Exercise and Nutritional Sciences (Graduate Adviser)
Donna L. Beschtoor, Ph.D., Associate Professor of Exercise and Nutritional Sciences
Kathleen L. D'Ovidio, Ph.D., Assistant Professor of Exercise and Nutritional Sciences
Mee Young Hong, Ph.D., Assistant 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, and 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) TOEFL score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).

Master of Science Degree in Nutritional Sciences

Master of Science Degree in Nutritional Science and Master of Science Degree in Exercise Physiology
The following materials should be mailed or delivered by February 1 for admission for the fall semester to:

School of Exercise and Nutritional Sciences
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7251

(1) Two letters of recommendation;
(2) Statement of purpose (1-2 pages describing applicant's background, research interests/experiences, and goals).

Master of Science Degree in Nutritional Sciences

General Information
For information regarding graduate coursework and research experience leading to a Master of Science degree in nutritional sciences, contact the adviser in the School of Exercise and Nutritional Sciences. The general program of study may include coursework in nutrition or food science. Thesis research in nutrition may be conducted using human subjects or experimental animals. Research activity of the faculty currently includes: nutritional status of children, elders, and ethnic groups; metabolic studies on cholesterol and energy balance; and factors affecting human lactation, body composition and obesity, athletic performance and fitness, composition of human milk and composition and stability of foods. Laboratories, including animal facilities and equipment, at SDSU support research conducted under the direct supervision of the nutritional sciences graduate faculty. In addition, students may conduct research at other facilities in the community in conjunction with collaborative studies pursued by nutritional sciences faculty and researchers at other institutions in San Diego.

Graduates with the M.S. degree in nutritional sciences are employed as administrators or service providers of community nutrition programs, food service supervisors, and community college educators, as well as, in administrative, research, or quality control positions within industry and government.

Admission to the Degree Curriculum
All students must satisfy the general requirements for admission to the university with classified graduate standing as described in Part Two of this bulletin. In addition, students must have bachelor's degrees in foods and nutrition or related fields and satisfy the prerequisites of the courses selected. If students' undergraduate preparation is deemed insufficient, students will be required to complete specified courses in addition to the minimum of 30 units required for the master's
degree in nutritional sciences. Students must have a grade point average of 3.0 in the last 60 semester units attempted, and a minimum score of 950 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) or Exercise and Nutritional Sciences 790 (Directed Readings) as 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.

**Plan A**

- ENS 601 Experimental Methods in Exercise and Nutritional Sciences (3)
- ENS 602 Research Evaluation in Exercise and Nutritional Sciences (3)
- ENS 633 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 706 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 B**

- ENS 790 Seminar in Directed Readings (3) Cr/NC

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 361 or 560. Dietary modifications, adjunct to medical treatment, used to prevent and alleviate the biochemical and physiological symptoms of disease.

NUTR 607. Child Nutrition (3)
Prerequisites: Nutrition 302 and 302L. Nutrition, health, and biochemical growth in children. Conditions leading to malnutrition, prevention, and correction.

NUTR 608. Geriatric Nutrition (3)
Prerequisites: Nutrition 302 and 302L. Biomedical and psychosocial aspects of aging that affect food habits, nutritional status, and nutrient needs of elders.

NUTR 610. Nutrition and Energy (3)
Prerequisites: Nutrition 302, 302L, and 309. Methods for measurement of energy intake and expenditure assessment, factors which control food intake and energy expenditure, and examination of normal and specialized needs of energy requirements.

NUTR 700. Seminar in Nutrition (3)
Prerequisites: Nutrition 302 and 302L. Reading and analyses of basic and applied research in nutrition.

NUTR 796. 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
Prerequisite: 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.
Oceanography and Marine Studies
Administered by the Department of Geological Sciences

OFFICE: Geology/Mathematics/Computer Science 237
TELEPHONE: 619-594-5586
http://www.geology.sdsu.edu

Faculty Committee for Marine Studies
Richard M. Gersberg, Ph.D., Professor of Public Health, Interim Director of Coastal and Marine Institute
Todd W. Anderson, Ph.D., Associate Professor of Biology
Stephen A. Schellenberg, Ph.D., 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.

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<td>CIV E 641 Advanced Foundation Engineering (3)</td>
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<th>Geography Courses (GEOG) Adviser: Stow</th>
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</thead>
<tbody>
<tr>
<td>GEOG 504 Coastal and Submarine Geomorphology (3)</td>
</tr>
<tr>
<td>GEOG 588 Intermediate Remote Sensing of Environment (4)</td>
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<tr>
<td>GEOG 670 Environmental and Resource Conservation Theory (3)</td>
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<tr>
<td>GEOG 770 Seminar in Environmental and Resource Conservation (3)</td>
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<tr>
<th>Geological Sciences Courses (GEOL) Adviser: Schellenberg</th>
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<tbody>
<tr>
<td>GEOL 540 Marine Geology (3)</td>
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<tr>
<td>GEOL 545 Descriptive Physical Oceanography (3)</td>
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<td>GEOL 625 Paleocology (3)</td>
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<tr>
<td>GEOL 640 Geotectonics (3)</td>
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</tbody>
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<tr>
<th>Public Health Courses (P H) Adviser: Gersberg</th>
</tr>
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<tbody>
<tr>
<td>P H 634 Environmental Protection (3)</td>
</tr>
<tr>
<td>P H 637 Mechanism of Toxicity (3)</td>
</tr>
<tr>
<td>P H 639 Water Quality Investigation (3)</td>
</tr>
</tbody>
</table>

* Acceptable when of relevant content.
Philosophy
In the College of Arts and Letters

OFFICE: Arts and Letters 446
TELEPHONE: 619-594-5263
http://philosophy.sdsu.edu

Faculty
Robert M. Francescotti, Ph.D., Professor of Philosophy, Chair of Department
J. Angelo Corlett, Ph.D., Professor of Philosophy
Darrel Moellendorf, Ph.D., Professor of Philosophy
Stephen L. Weber, Ph.D., Professor of Philosophy and University President
Thomas S. Weston, Ph.D., Professor of Philosophy
Peter C. Atterton, Ph.D., Associate Professor of Philosophy
Steven L. Barbone, Ph.D., Associate Professor of Philosophy (Graduate Adviser)
Deborah G. Chaffin, Ph.D., Associate Professor of Philosophy
Sandra A. Wawrytko, Ph.D., Associate Professor of Philosophy
Mark R. Wheeler, Ph.D., Associate Professor of Philosophy

General Information
The Department of Philosophy offers a program of graduate studies leading to the Master of Arts degree. 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 admission.

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

Department of Philosophy
The following materials should be mailed or delivered to:

Department of Philosophy
(Attention: 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 3.5 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 507. Twentieth Century Anglo-American Philosophy (3)
Prerequisite: Six upper division units in philosophy.
Major movements, issues, or figures of twentieth century Anglo-American philosophy. Course may be repeated with new content. Maximum credit six units.

PHIL 508. Existentialism (3)
Prerequisite: Six units in philosophy.
The philosophical aspects of existentialism. Major emphasis is on the diversity of thought within a common approach as this is shown in individual thinkers.

PHIL 510. Philosophy of Law (3)
Prerequisites: Three units from Philosophy 101, 102, or 103; and three units from philosophy or political science.
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.
Phenomenological 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 upper division units in philosophy.
Prominent theories of reality, e.g., realism and nominalism, materialism and idealism, teleology and determinism.

PHIL 532. Philosophy of History (3)
Prerequisite: Six units in philosophy.
Philosophical examination of issues raised by the religious impulse in man.

PHIL 535. Philosophy of Religion (3)
Prerequisite: Six units in philosophy.
Philosophical examination of issues raised by the religious impulse in man.

PHIL 536. Philosophy of Mind (3)
Prerequisite: Three upper division units in philosophy.
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 541. History of Aesthetics (3)
Prerequisites: Philosophy 101, 102 or 103.
Major documents in the history of aesthetics.

PHIL 542. Philosophy of Art (3)
Prerequisite: Six units in philosophy.
The nature of aesthetic experience. Principal contemporary theories of art in relation to actual artistic production and to the function of art in society.

PHIL 543. Philosophy and Literary Theory (3)
Prerequisites: Three upper division units in philosophy and three upper division units in literature.
Relations between philosophy and literary discourse. Strategies of interpretation offered by major contemporary thinkers.

PHIL 556. Asian Philosophies (3)
Prerequisite: Philosophy 351 or Philosophy 253.
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 (sunyta, 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 nine units 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 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.
Physics
In the College of Sciences

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

Department of Physics

Master of Arts Degree in Physics
Master of Science Degrees in Physics
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 assistantship 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 require-
ments for the bachelor's degree in physics. (Refer to the General
Catalog for a description of these majors.) If the student's undergradu-
ate 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 604A, 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 604A, 606, 608, and 610A. Eighteen additional units of 500-, 600- or 700-numbered electives must be selected with the approval of the Physics department graduate adviser. The Master of Arts degree in physics requires the completion of Plan B, a comprehensive written examination.

Specific Requirements for the Master of Science Degree in Physics

(Major Code: 19021) (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 604A, 606, 608, 610A, 797 (3 units) and 799A. Twelve additional units of 500-, 600-, or 700-numbered electives must be selected with the approval of the Physics department graduate adviser. The student is required to pass a final oral examination on the thesis.

Master of Science Degree in Radiological Health Physics

Admission to 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.
3. 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 516. Theory of Scientific Instrumentation (3)
Prerequisites: Physics 311, Mathematics 342B.
Fourier analysis with applications to scientific instrumentation, spectroscopy, and image processing; Z transforms and digital filtering; detection systems and their optimization of the signal-to-noise ratio.

PHYS 532. Condensed Matter Physics (3)
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)
Prerequisite: Credit or concurrent registration in Physics 532.
Experiments in various fields of condensed matter such as X-ray diffraction, Hall effect, superconductivity, and electron paramagnetic resonance.

PHYS 534. Colloquium in Condensed Matter Physics (1) Cr/NC
Prerequisite: Credit or concurrent registration in Physics 532.
Student and faculty research project presentations. Maximum credit three units.

PHYS 538. Polymer Science (3)
(Same course as Chemistry 538)
Structure, synthesis, physical properties, and utilities of polymers.

PHYS 551. 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 552. Modern Optics Laboratory (3)
One lecture and six hours of laboratory.
Prerequisites: Physics 357 with minimum grade of C; Physics 406 with minimum grade of C; credit or concurrent registration in Physics 552.
Experiments in various fields of modern optics such as holography, physics of lasers, Fourier transform spectroscopy, Raman spectroscopy, light modulation techniques, fiber optics, spatial filtering, diffraction grating spectroscopy, radiometry, and nonlinear optics.

PHYS 554. Colloquium in Optics Research (1) Cr/NC
Prerequisite: Concurrent registration in Physics 498A or 498B or 797 and consent of instructor.
Student and faculty research project presentations. Maximum credit three units.

PHYS 560. Radiological Physics and Dosimetry (3)
Prerequisite: Credit or concurrent registration in Physics 354.
Ionizing radiation fields, interactions of radiation with matter, cavity theory, external radiation dosimetry.

PHYS 561. Nuclear Instrumentation (3)
One lecture and six hours of laboratory.
Prerequisites: Physics 311 and 560.
Radiation detection, measurement, and spectroscopy. Ionization chambers, GM and proportional counters, scintillation and semiconductor detectors, and thermoluminescent dosimetry.
PHYS 564. Nuclear Physics (3)
Prerequisite: Consent 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 formation
of the laws of physics, applications of special relativity, introduction to
curved space time, cosmology.

PHYS 580. Computational Physics (3)
Prerequisites: Physics 354, Computer Engineering 160 or Com-
puter Science 106; and credit or concurrent registration in Physics
400A.
Computer programming for numerical solution of problems in clas-
sical mechanics, electromagnetism, optics, and quantum mechanics.
Use of Fortran and C programming languages and the UNIX operating
system. Incorporation of standard subroutines for linear algebra and
differential equations into student written programs.

PHYS 596. Special Topics in Physics (1-4)
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.

PHYS 600. Seminar (1-3)
Prerequisite: Consent of instructor.
An intensive study in advanced physics. May be repeated
with new content. See Class Schedule for specific content. Maximum
credit six units applicable to a master’s degree.

PHYS 604A. Electromagnetic Theory (3)
Prerequisite: Physics 400B.
Electrostatics, magnetic induction, and magnetostatics, Maxwell’s
equations, electromagnetic waves and radiation, fields in macro-
scopic media, special relativity.

PHYS 604B. Electromagnetic Theory (3)
Prerequisite: Physics 604A.
Wave guides, optical phenomena and diffraction, multipole expan-
sions, radiation by moving charges, plasma physics, electromagnetism and quantum mechanics.

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. Inter-
acting systems. Phase transitions.

PHYS 608. Classical Mechanics (3)
Prerequisites: Physics 350 and Mathematics 342B.
Vector and tensor methods, motion of rigid bodies, vibration,
coupled circuits, Lagrange’s and Hamilton’s equations, principle of
least action.

PHYS 610A-610B. Quantum Mechanics (3-3)
Prerequisites: 610A: Physics 410. Physics 610B: Physics 610A.
Physical and mathematical basis of quantum mechanics. Wave
mechanics and the Schroedinger Equation, matrices and Hilbert
space, angular momentum and spin, atomic structure, bound-state
perturbation theory, many particle systems, transition rates and time-
dependent perturbation theory, scattering, and relativistic quantum
mechanics.

PHYS 670A-670B. Medical Physics (3-3)
Prerequisites: Physics 560 and 561.
Radiological physics, dosimetry, imaging, and radiation protection
in medical environments including diagnostic radiology, nuclear
medicine, and radiation oncology.

PHYS 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.
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 interdisciplin- ary 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 associations.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. In addition, students seeking the Master of Arts degree in political science must attain a satisfactory score on the GRE General Test (minimum of 500 on both the verbal and quantitative portions of the test). The department also requires that applicants submit two letters of recommendation from individuals familiar with the academic work or potential of the applicant along with a statement of purpose written by the applicant. Students must have completed 30 semester units of coursework in the social sciences, including at least 12 upper division units in political science, as approved by the department. The grade point average required for admission is 3.0 for the last 60 semester units of undergraduate work, a 3.0 grade point average in upper division courses in political science, and a 3.0 grade point average for all work taken in political science. An applicant who is deficient in any of these requirements may be considered for conditional admission. The application deadline for the fall semester is April 1. Currently, the department accepts applications for admission in the spring semester. The application deadline is November 1.

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

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

Graduate Admissions

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

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

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

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

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

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

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

Department of Political Science
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4427

(1) Two letters of reference;
(2) Personal statement.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as stated in Part 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 an examination in a language other than one's native language and other than English at a level approved by the department.
4. POL S 515. Pass a course in statistics equivalent to POL S 516.

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 examining 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)
2. POL S 516 Statistics for Political Scientists (3), or its equivalent.
3. POL S 601 Seminar in the Scope and Methods of Political Science (3)
4. Four graduate seminars chosen from 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)

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)
2. POL S 516 Statistics for Political Scientists (3), or its equivalent.
3. POL S 601 Seminar in the Scope and Method of Political Science (3)
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.
5. 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 specialization in public policy are (SIMS Code: 115560):

1. POL S 515 Research Design and Analysis in Political Science (3) AND
   POL S 516 Statistics for Political Scientists (3), or its equivalent.
2. POL S 601 Seminar in the Scope and Method of Political Science (3)
3. POL S 603 Seminar in Theory and Method of Public Policy Analysis (3)
4. POL S 796 Internship in Public Policy (3)
5. Two graduate seminars chosen from among the following:
   POL S 620 Seminar in American National Government (3)
   POL S 625 Seminar in Political Behavior (3)
   POL S 630 Seminar in Politics (3)
   POL S 635 Seminar in Politics of Public Policy (3)
   POL S 651 Seminar in Migration and Border Politics (3)
   POL S 655 Seminar in General Comparative Political Systems (3)
   POL S 661 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.
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 specialization in international relations/comparative politics specialization are (SIMS Code: 115551):

1. POL S 515 Research Design and Analysis in Political Science (3) AND
   POL S 516 Statistics for Political Scientists (3), or its equivalent.
2. POL S 601 Seminar in the Scope and Method of Political Science (3)
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. 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)

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 exensive paper relating internship experience to theories of public policy.

POL S 797. Research in Political Science (3) Cr/NCR/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/NCR/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/NCR/RP
Prerequisite: 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/NCR
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/NCR
Prerequisite: Completion of 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.
Psychology

In the College of Sciences

OFFICE: Life Sciences 110
TELEPHONE: 619-594-5358 / FAX: 619-594-1332
http://www.psychology.sdsu.edu

Faculty
Georg E. Matt, Ph.D., Professor of Psychology,
Chair of Department
Catherine J. Atkins, Ph.D., Professor of Psychology and Associate
Dean for Faculty Affairs of the College of Sciences
Donna Castañeda, Ph.D., Professor of Psychology
Thereasa A. Cronan, Ph.D., Professor of Psychology
Roger M. Dunn, Ph.D., Professor of Psychology and Associate Dean
for Academic Affairs of the Imperial Valley Campus
Richard G. Graf, Ph.D., Professor of Psychology
Keith 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
Sandra P. Marshall, Ph.D., Professor of Psychology
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 (Graduate Adviser)
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 and Vice President
for Research and Graduate Dean of the Office of Graduate and
Research Affairs
Jennifer D. Thomas, Ph.D., Professor of Psychology
Jean M. Twenge, Ph.D., Professor of Psychology
Nader Amir, Ph.D., Associate 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
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
May Yeh, Ph.D., Associate Professor of Psychology
Susan M. Brassr, Ph.D., Assistant Professor of Psychology
Elizabeth D. Cordero, Ph.D., Assistant Professor of Psychology
Lisa Kath, Ph.D., Assistant Professor of Psychology
Pamela Pope, Ph.D., Assistant Professor of Psychology
Melody S. Sadler, Ph.D., Assistant Professor of Psychology
Sara J. Unswoth, Ph.D., Assistant Professor of Psychology
Allison A. Vaughn, Ph.D., Assistant Professor of Psychology
V. Robin Weersing, Ph.D., Assistant Professor of Psychology

Associateships and Assistantships
Graduate teaching associateships and graduate assistantships in
psychology are available to a limited number of qualified students.
Application forms and further information may be obtained from the
master's program adviser, Department of Psychology.

General Information
A Master of Science degree program in applied psychology with a
focus on industrial/organizational psychology or program evaluation is
offered. A Master of Arts degree program with a specialization in
physical and mental health research, developmental, behavioral and
cognitive neuroscience, social/personality or learning and cognition is
available for persons who expect subsequently to pursue a Ph.D.
degree. For students currently enrolled in the Ph.D. program, an M.S.
in Clinical Psychology is offered. In addition, the Department of
Psychology, jointly with the Department of Psychiatry, University of
California, San Diego, School of Medicine, offers an APA-accredited
program of graduate study leading to the Doctor of Philosophy degree
in clinical psychology with specialization in behavioral medicine, neu-
ropsychology, 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 satis-
factorily 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/experimen-
tal 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 tran-
scripts for work completed since last attendance.
• Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

(2) GRE scores (http://www.ets.org; SDSU institution code 4682);
(3) TOEFL or IELTS score, if the language of instruction was not English (for TOEFL see: http://www.ets.org; for IELTS see http://www.ielts.org; SDSU institution code 4682).

Department of Psychology
Students applying to both the SDSU/UCSD joint doctoral program and the SDSU master’s degree program are required to file only one university application and pay only one fee, which covers both programs. However, separate departmental applications, one for the master’s program and one for the doctoral program, must be filed if the student wishes to be considered for both programs.

Master of Arts Degree in Psychology

Master of Science Degree in Psychology
The following materials should be mailed or delivered to:
Department of Psychology
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4611

(1) Departmental application, which may be obtained at http://www.psychology.sdsu.edu;
(2) Statement of purpose (see psychology Web site for details);
(3) Completed application for an assistantship (if you are interested in this type of financial support);
(4) Three letters of recommendation (in sealed and signed envelopes returned to the applicant) from persons familiar with the applicant’s academic performance (see psychology Web site for recommendation forms).

Ph.D. Degree in Clinical Psychology
The following materials should be mailed or delivered to:
Selection Committee
6363 Alvarado Court, #103
San Diego, CA 92120-4913

(1) Three letters of recommendation;
(2) Joint doctoral program application.

Section I.
Master’s Degree Programs

Admission to the Degree Curriculum
Admission to the Department of Psychology master’s program involves a two-step process. Applicants must file one application with the university, and a separate application package with the Department of Psychology.

To be considered for admission to the Department of Psychology programs, applicants must satisfy particular department requirements. These requirements and instructions for completing the department application package are shown below. The department application form is available at http://www.psychology.sdsu.edu. Students are admitted to the master’s programs in the fall semester only.

To qualify for admission to the master’s programs in psychology, the student must have:

1. For the M.A. program: An undergraduate major in psychology (or coursework equivalent to the SDSU bachelor’s degree) consisting of at least 24 upper division units with a grade point average of at least 3.0. The major must include classes in general psychology, physiological psychology, statistical methods, psychological testing and measurement, and at least one laboratory course or the equivalent in psychology. In addition, the student must have completed three of the following classes:

Developmental psychology, introduction to research methods, intermediate statistics, social psychology, abnormal psychology, psychology of personality, cognitive psychology, psychology of learning, or sensation and perception. Six units of upper division psychology electives, which may be from the above list, are also required.

2. For the M.S. applied program: An undergraduate major in psychology (or coursework equivalent to the SDSU bachelor’s degree) consisting of at least 24 upper division units with a grade point average of at least 3.0. The major must include classes in general psychology, statistical methods, psychological testing and measurement, intermediate statistics or research methods, and at least one class providing research experience in psychology. In addition, the student must have completed three of the following classes: developmental psychology, social psychology, abnormal psychology, psychology of personality, cognitive psychology, industrial/organizational psychology, experimental psychology with laboratory, psychology of learning, or sensation and perception. Six units of upper division psychology electives, which may be from the above list, are also required.

3. A grade point average of not less than 3.0 in all undergraduate coursework.

4. A minimum score above the 50th percentile rank on both the verbal and quantitative sections of the GRE General Test.

5. The GRE should be taken by November. 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, 721, 722, 791 (Internship), 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, 865, 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.

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.
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 204 (Psychopathology).

In the fourth year, students are expected to submit and defend a dissertation proposal. Many students will also collect the data for and complete this 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 semester. A student who knowingly or unknowingly violate any part of the ethical code may be dismissed 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.

Cloudy Psychology 205 (Neuroanatomy), 896, and UCSD Clinical Psychology 202E (Psychopathology).

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, Howitt, 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

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.

PSY 502. Philosophical Issues in Psychology (3)
Prerequisite: Six units of psychology.

PSY 561. Advanced Neuropsychology (3)
Prerequisite: Psychology 360 or 361 or grade of B or better in Psychology 260.

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.

PSY 596. Selected Topics in Psychology (1-3)
Prerequisites: Psychology 101 and consent of instructor.

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 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.

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.
Selected areas within the field of clinical psychology including personality assessment, psychopathology, diagnosis, and treatment. Course may be repeated provided it is offered by a different instructor and the subject matter is substantially different. To enroll in the seminar for the second time, the student must submit a petition to be approved by the professor of the course and the master’s program adviser. Maximum credit six units applicable to a master’s degree.

PSY 760. Seminar in Physiological Correlates of Behavior (3)
Prerequisites: Psychology 260 or six units of biology; and consent of master’s program adviser.
Course may be repeated provided it is offered by a different instructor and the subject matter is substantially different. To enroll in the seminar for the second time, the student must submit a petition to be approved by the professor of the course and the master’s program adviser. Maximum credit six units applicable to a master’s degree.
PSY 761. Seminar in Ethology and Comparative Psychology (3)
Prerequisites: Biology 354 and consent of master’s program adviser.
Current problems in ethology and comparative animal behavior.
Course may be repeated provided it is offered by a different instructor
and the subject matter is substantially different. Maximum credit six
units applicable to a master’s degree.

PSY 770A-770B. Experimental Design and Data Analysis in
Behavioral Research (3-3)
Two lectures and two hours of activity.
Prerequisites: Psychology 370, 410, a passing score on the
departmental statistics placement test, and consent of master’s
program adviser.
Principles and methods of behavioral research stressing interde-
pendence 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 explor-
atory 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 regis-
tration 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 exami-
nation 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 psychopa-
thology. Methods of assessing developmental change and stability,
issues related to vulnerability and resiliency, developmental appro-
priateness 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. Develop-
ment 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, interper-
sonal, 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/behav-
ioral 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.
Public Administration

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

OFFICE: Professional Studies and Fine Arts 100
TELEPHONE: 619-594-6225 / FAX: 619-594-1165

Faculty
Stuart D. Henry, Ph.D., Professor of Public Affairs, Director of School
Roger W. Caves, Ph.D., Professor of Public Affairs
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
Louis M. Rea, Ph.D., Professor of Public Affairs
(M.P.A. Graduate Coordinator)
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) TOEFL score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).

School of Public Affairs
The following materials should be mailed or delivered to:
School of Public Affairs
Master of Public Administration
(Attention: Dr. Louis M. Rea)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4505

(1) Two letters of reference from individuals who have known the student's academic work and/or employment performance.

Advancement to Candidacy
All students must meet the general requirements for advancement to candidacy, as described in Part 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)

Transborder Public Administration and Governance Certificate
(Offered through the College of Extended Studies)

The purpose of the Certificate in Transborder Public Administration and Governance is to educate students in how U.S. and Mexico’s systems of public administration and governance function in the border region and what boundary spanning mechanism exists for transborder cooperation on shared issues.

Admission Requirement
1. A bachelor’s degree is required. The field of study can be any area of the social sciences, humanities, or professional programs of study such as public administration, communication and business administration. Other major areas will be considered at the discretion of the faculty.
2. Admission of students into the certificate program will be on a postbaccalaureate classified status.
3. Prospective students must demonstrate a basic level of currency and knowledge with regard to border issues. Such currency may be demonstrated through the applicant’s work experience and/or oral interview.
4. Applicants must have attained a grade point average of at least 2.5 (where A equals 4) in the last 60 semester (90 quarter) units attempted.

Course Requirements (18 units)
- 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 682 Seminar in Comparative Fiscal Structures: 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)

Students must maintain a minimum grade point average of 3.0 in all certificate courses and with no less than a C in any course. Only three units of coursework with a grade of C will count toward the certificate. Additional fees are associated with this program when taking courses through the College of Extended Studies. Additional information may be obtained from Dr. Stuart D. Henry.
**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**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
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<td>P A 501</td>
<td>Nonprofit Organizations and Government (3)</td>
<td>Prerequisites: Public Administration 301 and 460.</td>
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<tr>
<td>P A 510</td>
<td>Intergovernmental Relations in the United States (3)</td>
<td>Prerequisite: Public Administration 310 or 312 or 315.</td>
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<tr>
<td>P A 512</td>
<td>The Metropolitan Area (3)</td>
<td>Prerequisite: Public Administration 310 or 312 or 315.</td>
</tr>
<tr>
<td>P A 520</td>
<td>Decision Making in the Urban Community (3)</td>
<td>Prerequisite: Public Administration 310.</td>
</tr>
<tr>
<td>P A 525</td>
<td>The U.S. City Planning Process (3)</td>
<td>Prerequisite: Public Administration 320 or graduate standing.</td>
</tr>
<tr>
<td>P A 530</td>
<td>Negotiation and Bargaining in the Public Service (3)</td>
<td>Specific issues such as strategies, the effects of threat, the physical setting, use of a third-party observer and theories of advocacy.</td>
</tr>
<tr>
<td>P A 531</td>
<td>Governmental Employer-Employee Relations (3)</td>
<td>Prerequisite: Public Administration 330.</td>
</tr>
<tr>
<td>P A 540</td>
<td>Public Administrative Systems Analysis (3)</td>
<td>Prerequisites: Public Administration 301 and a statistics course.</td>
</tr>
<tr>
<td>P A 550</td>
<td>Budgetary and Financial Administration in the Public Sector (3)</td>
<td>Prerequisite: Public Administration 450.</td>
</tr>
<tr>
<td>P A 560</td>
<td>Comparative Public Administration (3)</td>
<td>Administrative organization and process of selected foreign and American governments. Analysis of the cultural basis of administrative systems.</td>
</tr>
<tr>
<td>P A 596</td>
<td>Experimental Topics (1-4)</td>
<td>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.</td>
</tr>
</tbody>
</table>

**GRADUATE COURSES**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>P A 600</td>
<td>Scope of Public Administration (3)</td>
<td>The development of public administration as an academic discipline; a systematic evaluation of the rise and operations of large-scale public bureaucracies.</td>
</tr>
<tr>
<td>P A 604</td>
<td>Methods of Analysis in Public and Urban Affairs (3)</td>
<td>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.</td>
</tr>
<tr>
<td>P A 605</td>
<td>Seminar in Research Methods in Public Administration (3)</td>
<td>Prerequisite: Public Administration 604.</td>
</tr>
<tr>
<td>P A 606</td>
<td>Seminar in Quantitative Approaches to Public Administration (3)</td>
<td>Prerequisite: Public Administration 604.</td>
</tr>
<tr>
<td>P A 620</td>
<td>Seminar in Management of Urban Governments (3)</td>
<td>Prerequisite: Public Administration 600.</td>
</tr>
<tr>
<td>P A 630</td>
<td>Seminar in Public Personnel Administration (3)</td>
<td>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.</td>
</tr>
<tr>
<td>P A 632</td>
<td>Seminar of Organization Development in the Public Sector (3)</td>
<td>Prerequisite: Public Administration 600.</td>
</tr>
<tr>
<td>P A 633</td>
<td>Collective Bargaining in the Public Sector (3)</td>
<td>Prerequisite: Public Administration 530 or 531.</td>
</tr>
<tr>
<td>P A 640</td>
<td>Seminar in Public Administration (3)</td>
<td>Prerequisite: Credit or concurrent registration in Public Administration 600. Selected topics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.</td>
</tr>
<tr>
<td>P A 642</td>
<td>Seminar in Administrative Theory (3)</td>
<td>Prerequisite: Public Administration 600.</td>
</tr>
<tr>
<td>P A 643</td>
<td>Seminar in Administrative Behavior (3)</td>
<td>Prerequisite: Public Administration 340.</td>
</tr>
<tr>
<td>P A 650</td>
<td>Seminar in Public Financial Management (3)</td>
<td>Prerequisite: Public Administration 450.</td>
</tr>
<tr>
<td>P A 660</td>
<td>Administration and Public Policy Development (3)</td>
<td>Prerequisite: Public Administration 600.</td>
</tr>
</tbody>
</table>

**SDSU GRADUATE BULLETIN 2010-2011**
P A 680. Seminar in Transborder Public Administration and Governance (3)
Prerequisite: Graduate standing.
National borders and theories and history of international boundaries; roles of public administrators in border regions; history, governance, economy, culture and political structure of U.S. and Mexico.

P A 681. Seminar in Comparative Federalism:
Mexico and the U.S. (3)
Prerequisite: Graduate standing.
Comparative analysis of governmental structures of Mexico and U.S.; focus on federalism in context of constitutional framework; historical and contemporary expressions of federalism in both countries.

P A 682. Seminar in Comparative Fiscal Structures:
Mexico and the U.S. (3)
Prerequisite: Graduate standing.
Comparative analysis of fiscal organization and structure in Mexico and U.S.; impact of federalism on fiscal structure; analysis of revenue flows and expenditure patterns; relationships of public finance and budgeting to public policy making.

P A 683. Seminar in Environmental Administration and Management in the Transborder Region (3)
Prerequisite: Graduate standing.
Environmental administration and management as structured in the border region; including U.S./Mexican federal environmental laws, Mexico/Baja California state level environmental laws, environmental issues related to soil, water, air, hazardous waste.

P A 684. Seminar in Transnational Criminal Justice:
Mexico and the U.S. (3)
Prerequisite: Graduate standing.
Criminal justice system in Mexico and U.S.; history, structure, and function of both systems, and similarities and differences between them; focus on transnational crime and responses to crime in border region.

P A 685. Practicum in Border Research (3)
One lecture and four hours of activity.
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: Public Administration 682.
Data resources and methodologies for conducting research and policy analysis related to local and regional governance of U.S./Mexico border area.

P A 687. Seminar in Comparative Urban Planning:
Mexico and the 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 688. Seminar in Organization Theory:
Comparative Application (3)
Prerequisite: Public Administration 682.
Traditional and contemporary theories of public organizations, including organizations that foster transborder relationships; analysis of organizations through cross-cultural lens of organization theory; application of theories to improve organizational strength across borders.

P A 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)

P A 796. Internship in Public Administration (3-12) Cr/NCR
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/NCR/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/NCR/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/NCR/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/NCR
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/NCR
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 300.
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)
Prerequisite: 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 Administration 540.
Influences on crime control and criminal justice process of actions by urban administrators, legislators and private sector in areas such as housing, education, public health and transportation, and urban development policies. (Formerly numbered Criminal Justice Administration 604.)

CJ 605. Seminar in Juvenile Justice and Youth Violence (3)
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.
Public Health

In the College of Health and Human Services

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http://publichealth.sdsu.edu

Faculty

Office of the Director
Carleen H. Stoskopf, Sc.D., Professor of Public Health, Director of School

Epidemiology and Biostatistics
Stephanie Kay Brodine, M.D., Professor of Public Health, Division Head

Health Management and Policy
Robert L. Seidman, Ph.D., Associate Professor of Public Health, Division Head

Health Promotion and Behavioral Science
Gregory A. Talavera, M.D., M.P.H., Professor of Public Health, Division Head

Environmental Health
Richard M. Gersberg, Ph.D., Professor of Public Health, Division Head

Preventive Medicine Residency
Linda L. Hill, M.D., M.P.H., Adjunct Associate Professor of Public Health, Director

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 with 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.
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. TOEFL 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 mailed or delivered to:

- Graduate School of Public Health
  (Attention: Coordinator for Admissions and Student Affairs)
  San Diego State University
  5500 Campanile Drive
  San Diego, CA 92182-4162

1. Complete the concurrent degree program application Parts I and II (includes narrative statement);

2. Three letters of recommendation;

3. Provide evidence of competence in or prior academic preparation in Latin American Studies, social and/or behavioral sciences, biological sciences, and/or health sciences;

4. Provide evidence of professional and academic activities related to Latin American Studies or the chosen area of concentration in the Graduate School of Public Health.

Master of Social Work Degree and Master of Public Health Degree

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) TOEFL 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.
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) TOEFL 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/phdadmissions.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 622 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 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)

OR

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

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: 557356)

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 Promotions 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:

Toxicology

| 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 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/Pp

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.
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)

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Prescribed Electives

(18 units from at least two departments)

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Culminating Experience

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<td>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.</td>
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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)

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Prescribed Electives (6 units)

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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)

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Prescribed Electives (6 units)

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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)

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Prescribed Electives (at least 6 units)

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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; (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.


- **SWORK 601** Seminar in Social Welfare Policy and Services (3)
- **SWORK 619** Human Behavior in the Social Environment (3)
- **SWORK 620A** Seminar in Human Behavior and Social Environment: Direct Practice (3)
- **SWORK 630** Social Work Practice: A Generalist Perspective (3)
- **SWORK 631** Social Work Practice: Individuals, Families, and Groups (3)
- **SWORK 632** Social Work Practice: Organizations and Communities (3)
- **SWORK 650** Field Practicum (7) Cr/NC
- **SWORK 690** Seminar in Social Work Research Methods (3)
- **SWORK 702** Seminar in Selected Social Welfare Policy and Services (3)
- **SWORK 740** Advanced Seminar in Social Work Administration (3)
- **SWORK 745** Advanced Seminar in Selected Topics in Social Work Administration (3)
- **SWORK 755** Advanced Field Practicum: Social Work Administration (8) Cr/NC/RP
- **SWORK 797** Research (3) Cr/NC/RP
- **PH 601** Epidemiology (3)
- **PH 602** Biostatistics (3)
- **PH 604** Environmental Determinants of Human Health (3)
- **PH 641** Introduction to Health Services (3)
- **PH 644** Health Services Organization and Management (3)
- **PH 645** Health Economics (3)
- **PH 647** Quantitative Methods and Health Data Analysis (3)
- **PH 648** Health Policy (3)
- **PH 742A** Health Services Financial Management (3)
- **PH 742B** Health Insurance and Financing Systems (3)
- **PH 747** Quality Improvement and Program Evaluation (3)
- **PH 748** Health Services Competitive Strategy and Marketing (3)

**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 addressing 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, 882; 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, 602, 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 from study, 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.


Public Health

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 dean 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. Kurrin 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.
Applicability 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.
Integrative 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.

**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. (Formerly numbered Public Health 644A.)

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. (Formerly numbered Public Health 647A.)

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
C. Environmental Health
D. Health Management and Policy
E. Health Promotion and Behavioral Science
F. 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)
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.
Topics in epidemiology 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 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.

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. (Formerly numbered Public Health 647B.)

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/techniques 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 demographics, 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
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)
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)
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)
Prerequisites: Consent of instructor.
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)
Prerequisites: Admission to the doctoral program and consent of instructor.
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 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. 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
http://www.cbbd.sdsu.edu

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, biological, and medical device products. Included in the core of required courses for the degree are graduate level business administration courses that address communications and management skills that are essential for the successful regulatory affairs professional in an industry work environment.

Master of Science Degree in Regulatory Affairs

(Offered through the College of Extended Studies)

The coursework in this curriculum is offered only in special sessions. Students in special session courses enroll through the College of Extended Studies and follow a fee structure that is different from that for regularly matriculated students. For more information, contact the director of the center or call the College of Extended Studies.

This degree program provides a comprehensive background in regulatory science with the additional training and experience required of regulatory affairs professionals to address federal and state regulatory statutes and laws with emphasis on the Food and Drug Administration. The degree is offered through the College of Sciences.

The degree offering focuses on laws and regulations imposed by the Federal government, especially the Food and Drug Administration, related to drug discovery, development, testing, and manufacture of products for commercial distribution. Also included are requirements for ongoing post-marketing surveillance. The degree program will provide students with detailed knowledge and understanding of current regulations and their practical application to the development and commercialization of drug, biologics, and medical device products. Also incorporated into the degree program are business administration courses that will provide students with communication and management skills essential for the successful regulatory affairs professional in an industry work environment.

Admission to Graduate Study

All students must satisfy the general admission and examination requirements for admission to the university with classified graduate standing, as described in Part Two of the Graduate Bulletin. In addition, the applicant must satisfy the following requirements before being considered for admission to classified graduate standing by the admissions review committee of the center.

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

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Regulatory Affairs office.

Graduate Admissions

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

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

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

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

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

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

Center for Bio/Pharmaceutical and Biodevice Development

The following materials should be mailed or delivered to:

Master of Science in Regulatory Affairs
Director of Regulatory Affairs Programs, CBBD
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4610

(1) Three letters of recommendation sent from persons who are knowledgeable about the candidate’s potential for success in graduate study;

(2) Applicant essay that describes the applicant’s purpose in pursuing graduate studies in regulatory affairs and relationship to personal and career objectives;

(3) List any employment or volunteer experience relevant to the proposed new degree major program.
Candidates for admission will typically come from one of the disciplines offered in the life and physical sciences and engineering. In some cases, candidates who have not fully completed the undergraduate requirements may be admitted with conditionally classified standing, subject to space availability, after consideration of those who meet the requirements for classified graduate standing. Students so admitted will be advised as to the nature of their deficiency and the time allowed to achieve full classified graduate standing. If the student's undergraduate preparation is insufficient, the student will be required to take courses for removal of the deficiency. Courses taken to make up such deficiencies are in addition to the minimum units for the master’s degree and may not be included on the student's program of study.

**Advancement to Candidacy**

All students must satisfy the general requirements for advancement to candidacy, as described in Part 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:

1. 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)

2. Complete 12 units of electives from the following courses.
   - R A 696 Advanced Topics in Regulatory Affairs (1-4)
   - R A 711 Current Good Manufacturing Practices – Advanced Topics (3)
   - R A 772 Post-Approval Activities, Including FDA Advertising, Promotion, and Labeling (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

3. Complete three units. Students must select Plan A or Plan B in consultation with the adviser. Students electing Plan A must complete Regulatory Affairs 799A (3) Cr/NC/RP. Students electing Plan B must select one additional course for three units in lieu of Regulatory Affairs 799A from the list of elective courses and pass a comprehensive examination.

**SDSU and California State University, East Bay Track**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete 37 semester units including the Advanced Certificate in Regulatory Affairs at California State University, East Bay (16 quarter units equivalent to 10 semester units). In addition, the student must also complete a minimum of 27 units as follows:

1. 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)

2. Complete 12 to 15 units of electives selected from:
   - R A 696 Advanced Topics in Regulatory Affairs (1-4)
   - R A 711 Current Good Manufacturing Practices – Advanced Topics (3)
   - R A 772 Post-Approval Activities, Including FDA Advertising, Promotion, and Labeling (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

3. Complete three units. Students must select Plan A or Plan B in consultation with the adviser. Students electing Plan A must complete Regulatory Affairs 799A (3) Cr/NC/RP. Students electing Plan B must select one additional course for three units in lieu of Regulatory Affairs 799A from the list of elective courses and pass a comprehensive examination.

**Advanced Certificate in Regulatory Affairs**

(Justed 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 (RA)

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

RA 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.

RA 602. Food and Drug Law (3)
Prerequisite: Regulatory Affairs 601.

RA 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.

RA 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.

RA 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.

RA 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.

RA 770. Current Good Manufacturing Practices - General Concepts (3)
Prerequisite: Regulatory Affairs 602.
Current Good Manufacturing Practice regulations to assure quality of marketed drug and biological products. Application to manufacturer's organization, personnel, facilities, equipment, control systems, production, process controls, laboratory procedures and records.

RA 771. Current Good Manufacturing Practices - Advanced Topics (3)
Prerequisite: Regulatory Affairs 770.

RA 772. Post-Approval Activities, Including FDA Advertising, Promotion, and Labeling (3)
Prerequisite: Regulatory Affairs 602.
FDA and FTC rules and regulations governing advertising, promotion, and labeling for prescription drugs, biologics, medical devices, and over-the-counter drugs.

RA 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(k)).

RA 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.

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.

RA 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.

RA 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.

RA 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.

RA 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.

RA 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.

RA 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.

RA 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.

RA 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.

RA 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.
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
http://religion.sdsu.edu

Faculty
Rebecca E. Moore, Ph.D., Distinguished Professor of Religious Studies, Chair of Department
Christopher Frost, Ph.D., Professor of Religious Studies and Associate Dean of the Division of Undergraduate Studies
Linda D. Holler, Ph.D., Professor of Religious Studies and Associate Dean of the College of Arts and Letters
Risa Levitt, Ph.D., Professor of Religious Studies
Khaleel Mohammed, Ph.D., Associate Professor of Religious Studies
Sthaneshwar Timalsina, Ph.D., Associate Professor of Religious Studies
Wilburn N. Hansen, Ph.D., Assistant Professor of Religious Studies

General Information
The department offers advanced coursework in religious studies which may be used toward fulfilling advanced degree requirements in Interdisciplinary Studies and in other departments with the approval of the student's graduate adviser.

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 530. Religion and Revolution (3)
Prerequisite: Three units of religious studies.

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.
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
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
Christopher Werry, Ph.D., Associate Professor of Rhetoric and Writing Studies
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 699, 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.

Interested students are encouraged to contact the Department of Rhetoric and Writing Studies, Graduate Program Director, 5500 Campanile Drive, San Diego, CA 92182-4452, to request an associateship application package.

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

Department of Rhetoric and Writing Studies
The following materials should be mailed or delivered to:

Department of Rhetoric and Writing Studies
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4452

(1) Letter of application;

(2) A 750-1000 word statement of purpose;

(3) A writing sample (minimum 10 pages total, in one or separate documents);

(4) Three letters of recommendation.

Adancement 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.

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

Electives (15 units)

Fifteen units of thematically focused electives selected with the approval of the Department of Rhetoric and Writing Studies graduate adviser.

**Specialization in the Teaching of Writing**

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

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

Electives (6 units)

Six units of thematically focused electives selected with the approval of the Department of Rhetoric and Writing Studies graduate adviser.

Advanced Certificate in 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 609 Teaching Composition in Secondary Schools (3)
- RWS 609 Theory and Practice of Teaching Composition (3)

**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)
- LING 653 ESL Reading and Writing (3)

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)**
  Prerequisite: 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 596, 696 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.
Rhetoric and Writing Studies

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.
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
http://www-rohan.sdsu.edu/~russian/

Chair of Department: Edith J. Benkov, 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.
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
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
Daniel J. Finnegan, Ph.D., Associate Professor of Social Work
Otila 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
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) TOEFL score, if medium of instruction was in a language other than English (http://www.ets.org SDSU institution code 4682).

Master of Social Work Degree
The following materials should be mailed or delivered to:
School of Social Work
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4452

(1) Departmental application available at:
http://socialwork.sdsu.edu/applying.php;

(2) Letters of recommendation;

(3) Personal statement.

Master of Social Work Degree and Juris Doctor Degree
The following materials should be mailed or delivered to:
School of Social Work
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4452

(1) Departmental application available at:
http://socialwork.sdsu.edu/applying.php;

(2) Letters of recommendation;

(3) Personal statement;

(4) Contact the Office of Admissions at California Western School of Law at 619-525-1463 for a separate application.

Master of Social Work Degree and Master of Public Health Degree
The following materials should be mailed or delivered to:
School of Social Work
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4119

(1) Submit a narrative statement as described in Instructions for Applicants;

(2) Submit three letters of recommendation.

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 lifelong 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.
Standard 60 Unit Master of Social Work 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 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).

Direct Practice (SIMS Code: 558207) OR Administration (SIMS Code: 558206)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Number of Units</th>
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<tbody>
<tr>
<td>SWORK 739</td>
<td>3</td>
</tr>
<tr>
<td>SWORK 744</td>
<td>3</td>
</tr>
<tr>
<td>SWORK 750</td>
<td>8</td>
</tr>
<tr>
<td>SWORK 770</td>
<td>3</td>
</tr>
</tbody>
</table>

Advanced Standing Program

In 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).
Direct Practice Social Work

In addition to the above courses, students must complete either a Thesis (Plan A) or a comprehensive written examination (Plan B). Students completing Plan A may count Social Work 799A as three units of elective. At least 30 units of the program must be completed in residence at San Diego State University. A maximum of 30 units is transferable from another accredited graduate program in social work.

Six units of elective credit may be taken from other schools or departments within the university with the consent of the graduate adviser. See student handbook for specific elective policies. To receive the degree, students must earn a 3.0 (B) grade point average in academic courses and demonstrate professional competence for required practicum (Cr for all semesters).

In addition, the National Association of Social Workers (NASW) Code of Ethics represents the professional standards of the MSW program. The NASW Code of Ethics is available in the student handbook. All students are expected to know and adhere to its principles of professional conduct. Students who knowingly or unknowingly violate any part of the ethical code may be dismissed from the program without further qualification regardless of coursework, research, or other academic achievement.

Student Handbook

The School of Social Work has a student handbook for graduate students containing policies and procedures not specified in this bulletin in addition to information to aid students in completing the MSW degree program. Students are responsible for the handbook on the Social Work homepage http://chhs.sdsu.edu/sw.

Program of Study

Advanced Standing Program

The first nine units of the advanced standing program taken during the summer semester are organized around the generalist/foundation of social work practice. The final 29 units commencing in the fall are organized around a methods focus area. Students will select one of the methods focus areas.

Standard 60 Unit Master of Social Work Program

The standard 60 unit Master of Social Work program is organized in the first year around the generalist/foundation courses. The second year program is organized around a methods focus area. Students will select one of the methods focus areas described below during the semester before beginning the second year of the program.

Methods Focus Areas

Direct Practice Social Work

Focus is on interpersonal conflicts and social functioning with emphasis on appropriate intervention methods used primarily with individuals, families, and groups. Emphasis is placed on a problem-solving framework that utilizes assessment/diagnosis, intervention/treatment and evaluative skills.

Social Work Administration

Focus is on designing, implementing, and managing human service programs and on leading and improving human service organizations. Particular emphasis is placed on strategic planning, effective human service delivery technologies, the design of management systems, and implementing organizational change strategies leading to organizational effectiveness.

Field of Service

In addition to the methods focus of the program of study, the curriculum provides students the opportunity to develop knowledge and skills in a specialized field of service while meeting their advanced human behavior, advanced social policy, advanced field practicum, and elective requirements. Students, with guidance from the graduate adviser and a faculty member serving as a professional mentor, select coursework that address their specific educational and career goals.

Based on the current strengths of the school’s faculty, students can use their coursework and their field practicum to develop specialized knowledge in the areas of child welfare, family services, mental health, aging, substance abuse, and health. In addition, students may use thesis research to extend their knowledge in one of these areas.

Master of Social Work Degree and Juris Doctor Degree

General Information

The School of Social Work and the California Western School of Law offer a four-year concurrent graduate program which allows students to earn simultaneously a Master of Social Work and a Juris Doctor (JD) degree in law. The objective of the concurrent degrees program is to prepare students who are competent in advanced practice where social work and law converge.

Admission to the Degree Curriculum

To request application materials for the concurrent dual degrees program in social work and law, applicants should contact the Office of Admissions at the School of Social Work, San Diego State University, and the Office of Admissions at California Western School of Law. Two separate application processes must be followed. Please see the Admission to Graduate Study section in this bulletin under the Master of Social Work degree program. (The only difference is that students earning the two degrees simultaneously may substitute the results of the LSAT examination for the GRE examination.) Applicants should indicate on the appropriate section of each application that they are applying for the concurrent dual degrees MSW/JD program.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part 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 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.
Direct Practice OR Administration  
(SIMS Code: 558208) (SIMS Code: 558209)  
SWORK 739 (3)  SWORK 740 (3)  
SWORK 744 (3)  SWORK 745 (3)  
SWORK 750 (8)  SWORK 755 (8)  
California Western School of Law  
(89 Units—including 12 units transferred from  
the School of Social Work)  
Civil Procedures I and II (6)  
Contracts I and II (6)  
Criminal Law I (3)  
Legal Skills I and II (4)  
Property I and II (6)  
Torts I and II (6)  
Constitutional Law II (3)  
Criminal Procedure I (3)  
Evidence (4)  
Professional Responsibility (2)  
Interdisciplinary Program for Child Abuse and Neglect (6)  
Independent Study (3)  
Internship (5)  
Electives: 32 units (includes 12 units from SDSU)  

The specific sequence of courses over the four year period is listed in the admissions material. Students attend the schools in the following pattern:  
Year 1 California Western School of Law only  
Year 2 San Diego State University School of Social Work only  
Year 3 (Fall) Both Schools  
Year 3 (Spring) California Western School of Law only  
Year 4 Both Schools  

Master of Social Work and Master of Public Health 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-Management  
(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 702 Seminar in Selected Social Welfare Policy and Services (3)  
SWORK 740 Advanced Seminar in Social Work Administration (3)  
SWORK 745 Advanced Seminar in Selected Topics in Social Work Administration (3)  
SWORK 755* Advanced Field Practicum: Social Work Administration (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  
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.
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 752 (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.

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 (3)
Human services program design and core managerial processes and techniques including program design, management information systems, organizational performance management, financial management, human resource management, and development of grant proposals.

SWORK 744. Advanced Seminar in Selected Topics in Direct Practice Social Work (3)
Prerequisites: Social Work 631, 632, and concurrent registration in Social Work 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)
Study of a selected aspect of social work management in human services. Strategic planning and management, marketing, leadership of human service organizations, organizational performance, management audits, organizational change management, and supervision. See Class Schedule for specific content.

SWORK 750. Advanced Field Practicum: 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 (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 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**  
[http://www.rohan.sdsu.edu/dept/sdsusoci/sociology.html](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 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**

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](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.

- **GRE scores** ([http://www.ets.org](http://www.ets.org), SDSU institution code 4682);

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

**Department of Sociology**

The following materials should be submitted to:

- **Department of Sociology**  
  (Attention: Graduate Adviser)  
  San Diego State University  
  5500 Campanile Drive  
  San Diego, CA 92182-4423

  (1) Three letters of recommendation;

  (2) A personal statement;

  (3) A writing sample (preferably an academic paper). If this is not available, send an extended, three to five page personal statement;

  (4) Copy of transcript;

  (5) See application information on the Department of Sociology home page at [http://www.rohan.sdsu.edu/dept/sdsusoci/sociology.html](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 mundane and family in post-industrial nations and less developed countries. Cross-cultural comparisons of family arrangements in contemporary America by social classes and racial-ethnic groups.

SOC 531. Working and Society (3)
Prerequisite: Sociology 101.
Structure and change in labor force, nationally and internationally. Social drama of work: self, roles, conflict, subcultures. Includes exploration of student work experiences, workers in the community, literacy, and film depictions of work worlds.

SOC 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.

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.

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.
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
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 faculty.

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

Department of Spanish and Portuguese Languages and Literatures
The following materials should be mailed or delivered to:
Department of Spanish and Portuguese Languages and Literatures
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7703

1. Three letters of 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.

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. 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.

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 609. History of the Spanish Language (3)
Prerequisite: Spanish 602.
Evolution of Spanish language from its origins to present day. General notions of structures of Latin. Sound changes, morphosyntactic changes, semantic, and lexical changes in Spanish. Origins of diversity of modern Spanish dialects.

SPAN 611. Advanced Topics in Spanish Linguistics (3-6)
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 661. Issues in the Study of Spanish Bilingualism (3)
Prerequisite: Spanish 602.

SPAN 681. Spanish/Spanish American Dialectology (3)
Prerequisite: Spanish 602.
Dialects of Spain and Latin America; emphasis on differences in pronunciation, syntax, and lexicon.

SPAN 682. Spanish Language Policy and Language Planning (3)
Prerequisite: Spanish 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 790. Seminar in Spanish Syntax and Morphology (3)
Prerequisite: Spanish 602.
Advanced study of the grammatical structures of Spanish.

SPAN 792. Spanish Language and Society (3)
Prerequisite: Spanish 602.

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

NOTES: 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.
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. Wulfteck, 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-Gelfen, 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, 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 and 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 4862):
(3) TOEFL score, if medium of instruction was in a language other than English (http://www.ets.org). SDSU institution code 4682).

School of Speech, Language, and Hearing Sciences

The following materials must be mailed or delivered and received by January 20:

School of Speech, Language, and Hearing Sciences
(Attention: Graduate Adviser)
San Diego State University
5500 Campus 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 43 units. The following core courses are required: Speech, Language, and Hearing Sciences 570, 600, 605, 606, 607, 608, 609A, 609B, 613, 614, 617, 675, and either 672 or 673. In addition, students must complete six units from Speech, Language, and Hearing Sciences 707, 750, 754, 790, 793, 794, 795, 797, 798, 799A, and Psychology 732.

Students electing to pursue the Certificate of Clinical Competence in Speech-Language Pathology (ASHA), California licensure for Speech-Language Pathology, or the Clinical-Rehabilitative Services Credential (Language, Speech and Hearing or Special Day Class) for California Schools should complete, in addition to the required courses listed above, additional courses and clinic hours required by national and state organizations. It is school policy that all credential students maintain a 3.0 grade point average in all 600 level and above credential courses.

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.

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, 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 focus 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, 605, 606, 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), Kritchevsky (Neurosciences), Kutas (Cognitive Science), Mayberry (Linguistics), Moore (Linguistics), Padden (Communications), Rüdiger (Psychology), Townsend (Neuroscience), Trauner (Neuroscience).

University of California, San Diego: Ackerman (Linguistics), Bellugi (Salk Institute, Psychology), Clever (Psychology), Coulson (Cognitive Science), Deák (Cognitive Science), Elman (Cognitive Science), Ferreira (Psychology), Halgren (Neurosciences), Kritchevsky (Neurosciences), Kutas (Cognitive Science), Mayberry (Linguistics), Moore (Linguistics), Padden (Communications), Rüdiger (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 specific requirements of this program which include (a) an acceptable baccalaureate or master’s degree or equivalent from a regionally accredited institution; (b) a GPA of at least 3.25 on a 4.0 scale in the last 60 semester (or 90 quarter) credits of upper division and/or graduate courses; (c) good standing in the last institution attended; (d) suitable scores on both the quantitative and verbal sections of the Graduate Record Examination; (e) submission of appropriate application form and supporting materials as outlined below.

Applicant files are reviewed as a group by an admissions committee, composed of doctoral program faculty from each campus. Other doctoral faculty may review applicant files and make recommendations to the admissions committee. Assuming that the above requirements are met, decisions will also be guided by an evaluation of the adequacy of the applicant’s preparation in view of their stated needs and objectives. Given the limited number of spaces available (4 to 6 new admissions each year are anticipated, subject to available facilities), the admissions committee will select the best qualified applicants to fill the available spaces. No minimum set of qualifications will guarantee an applicant admission to the doctoral program. The admissions committee will make recommendations for admission to the graduate deans from each campus.

Application. Students will be admitted to the doctoral program only in the fall semester/quarter. Applications and all other supporting materials must be received (not postmark) by January 20 to be considered for the doctoral program beginning in the following fall semester/quarter.

Application Guidelines for the SDSU/UCSD Joint Doctoral Program in Language and Communicative Disorders

To be admitted to the Joint Doctoral Program, applicants must electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the SDSU/UCSD Joint Doctoral Program.

Graduate Admissions

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

Graduate Admissions

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

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

Note:

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

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

SDSU/UCSD Joint Doctoral Program

The following materials should be submitted in a single envelope by January 20 to:

SDSU/UCSD Joint Doctoral Program in Language and Communicative Disorders
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1518

(1) Departmental application form (http://chhs.sdsu.edu/slhs);
(2) Statement of purpose;
(3) Three letters of recommendation (http://chhs.sdsu.edu/slhs) in individually sealed envelopes;
(4) Publication reprints or presentation abstracts, if available.

http://www.csumentor.edu
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 of 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 either experimental 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 210F 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. 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 their 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 assistantships, 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.

Credentialed 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 practice). Consult an adviser in the area in which certification 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. Low Incidence Communicative Disorders (3)**

- Prerequisites: Speech, Language, and Hearing Sciences 320 and 321.
- Characteristics, etiologies, assessment, and intervention strategies for fluency, voice, and craniofacial/cleft palate disorders.

**SLHS 511. Pediatric Aural Rehabilitation (3)**

- Prerequisites: Speech, Language, and Hearing Sciences 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**

- 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 California Rehaabilitative 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.
Speech, Language, and Hearing Sciences

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 les-
son 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 supervi-
sion. 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 sci-
ences 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 601. Speech-Language Science Instrumentation and
Applications (2)
Prerequisite: Consent of instructor.
Instrumentation and measurement techniques in speech and language
clinical and disorders.

SLHS 603. Neuroscience of Speech and Language (2)
Prerequisite: Consent of instructor.
Basic neuroanatomy and neuropsychology of speech, language,
and related cognitive systems.

SLHS 605. Fluency and Fluency Disorders (2)
Prerequisite: Consent of instructor.
Theory, diagnosis, and treatment of fluency disorders in children,
adolescents, and adults.

SLHS 606. Voice and Resonance Disorders (3)
Prerequisite: Consent of instructor.
Normal voice mechanism, symptoms and cause of voice and
resonance disorders and their management.

SLHS 607. Phonology and Phonological Disorders (3)
Prerequisite: Consent of instructor.
Characterization of phonological disorders, assessment frame-
works, 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 cognitive and linguistic 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, demyelinating illness or frontal lobe
impairments.

SLHS 613. Language Disorders: Infancy Through Preschool (3)
Prerequisite: Consent of instructor.
Principles and procedures for culturally relevant assessment of
communication disorders in children and adults. Ethnographic inter-
viewing; formal, informal, and unbiased testing; clinical reporting.
Practice with selected methods and tools.

SLHS 618A. Diagnostic Practicum in Speech-Language
Pathology: Pediatrics (1)
Four hours of supervision.
Prerequisites: Speech, Language, and Hearing Sciences 600 or
601, 603, 607, 613, 617, and two units of 525.
Supervised clinical practice in diagnostic methods with pediatric
clients. Maximum credit six units.

SLHS 618B. Diagnostic Practicum in Speech-Language
Pathology: Adults (1)
Four hours of supervision.
Prerequisites: Speech, Language, and Hearing Sciences 600 or
601, 603, 607, 613, 617, and two units of 525.
Supervised clinical practice in diagnostic methods with adult
clients. Maximum credit six units.

SLHS 619. Multidisciplinary Diagnostic Practicum in Speech-
Language Pathology (1)
Four hours of supervision.
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 or
601, 603, 607, 613, 617, and two units of 525.
Supervised intervention practica with children. Up to two hours per
week of client contact plus staffing. Up to three units may be taken
concurrently. Maximum credit nine units. (Formerly numbered
Speech, Language, and Hearing Sciences 626.)

SLHS 626B. Neurogenic Speech-Language Intervention (0.5)
Two hours of supervision.
Prerequisites: Speech, Language, and Hearing Sciences 600 or
601, 603, 607, 613, 617, and two units of 525.
Supervised intervention practica with adults with neurogenic
communication disorders. Up to two hours per week of client contact
plus staffing. Up to three units may be taken concurrently. Maximum
credit nine units.
SLHS 626C. Voice/Fluency/Dysphagia Clinical Intervention (0.5)
Two hours of supervision.
Prerequisites: Speech, Language, and Hearing Sciences 600 or 601, 603, 607, 613, 617, and two units of 525.
Supervised intervention practica with voice, fluency, and/or swallowing disorders. Up to two hours per week of client contact plus staffing. Up to three units may be taken concurrently. Maximum credit nine units.

SLHS 627. Advanced Field Clinical Practice in Speech-Language Pathology and Audiology (1-3) Cr/NC
Two hours of therapy, one hour of staffing, and Grand Rounds attendance once per month.
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 655. Curriculum in Education of the Deaf and Hard-of-Hearing (3)
Prerequisite: Speech, Language, and Hearing Sciences 513.
Application of cognitive processing theory to development and evaluation of curriculum, materials, and procedures; selection of learning modalities and appropriate modification of curriculum.

SLHS 656. Advanced Clinical Practice with Learners Who are Deaf or Hard-of-Hearing (1) Cr/NC
Three hours of laboratory.
Supervised clinical practicum at an advanced level with representative deaf cases. Maximum two units per semester; maximum credit four units.

SLHS 658. Seminar in Deafness (3)
Prerequisite: Speech, Language, and Hearing Sciences 550.
Problems of deafness, evaluation of research, interdisciplinary approach to aural habilitation. Offered every other year. See Class Schedule for specific content and semester offered.

SLHS 668. Multicultural Issues in Deafness (3)
Prerequisite: Speech, Language, and Hearing Sciences 350 or equivalent experience.
Review and analysis of research in multicultural lifespan communication processes in deaf individuals. Emphasis on communication needs in health care, education, and informal social settings.

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.

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.
Interactive study in specific areas such as 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: Speech, Language, and Hearing Sciences 595 and 795.
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 COURSES

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 929; four units of practice; post-baccalaureate standing; California Basic Education Skills Test; Certificate of Clearance; school approval.
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 practice; post-baccalaureate standing; California Basic Education Skills Test; Certificate of Clearance; school approval.
Clinical practice in elementary or secondary schools or community colleges in speech-language pathology. Applies only toward Clinical-Rehabilitative Services Credential (C-RS) or Certificate of Clinical Competency in Speech-Language Pathology (ASHA).

SLHS 953. Directed Internship: Education of the Deaf (1-5) Cr/NC
Prerequisites: Speech, Language, and Hearing Sciences 655, 658, 668, and two units of 656. ASL fluency evaluation required prior to enrollment.
Supervised student teaching in schools and special day classes with learners who are deaf, hard-of-hearing, or deaf with special needs. Practicum meets standards of California Commission on Teacher Credentialing and National Council on Education Council on Education of the Deaf.

SLHS 963. Professional Seminar in Education of the Deaf, Level II (3)
Prerequisite: Level I Education Specialist Credential: Deaf and Hard-of-Hearing. For Level II Hard-of-Hearing Credential program.
Topics in language acquisition and how these apply to DHH classrooms. Classroom ethnography and health and technology competencies.
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)
Chi-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 biostatis-
tics 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 interpreta-
tion 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;
and one semester each of linear algebra and probability theory. The
student should also have working knowledge of a programming
language before entering the program. Students lacking some of the
above undergraduate coursework may be admitted conditionally
and may make up this coursework during the first year of the program
(these courses will not count toward the degree course requirements).

The student must complete a minimum of 30 units of coursework as
described below. Upon entry to the program, the student will be
assigned to a graduate adviser in statistics. Thereafter, the adviser
will meet with the student each semester and discuss his or her academic
program. A program of study must be approved by the graduate
adviser in statistics.

1. Complete Statistics 560, 670A, 670B with no grade less than B in
each course. These are core statistics courses.

2. Complete nine units of courses in statistics and biostatistics,
selected from the following with the approval of the graduate
adviser in statistics: Statistics 570, 672, 673, 676, 677, 678, 679,

3. Complete three additional units of 600- and 700-numbered
courses offered by the Department of Mathematics and Statistics,
except that Mathematics 600, 601, 602, and Statistics 799A may
not be used to fulfill these units required.

4. Complete three additional units of graduate level or approved 500-
level courses offered by the Department of Mathematics and Sta-
tistics, not including Statistics 799A.

5. Complete three units of approved electives.

6. The thesis option (Plan A) requires approval of the graduate
adviser and the statistics division faculty member who will chair the
thesis committee. Students who choose Plan A must include Statis-
tics 799A in the 30-unit program and are required to pass a final
oral examination on the thesis, open to the public.

7. In other cases, Plan B will be followed. Students who choose Plan
B are required to complete at least two units of Statistics 795, one
unit of Statistics 720 or 790 or one additional unit of 795, and pass
a comprehensive written examination. Policy and procedures for
the Plan B examination are documented and available from the
Department of Mathematics and Statistics.

Specific Requirements for the Master of Science Degree in Statistics with
Concentration in Biostatistics
(Major Code: 17021) (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 and one semester each of linear algebra and probability theory. The student should also have working knowledge of a programming language before entering the program. Students lacking some of the above undergraduate coursework may be admitted conditionally and may make up this coursework during the first year of the program (these courses will not count toward the degree course requirements).

The student must complete a minimum of 30 units of coursework as described below. Upon entry to the program, the student will be assigned to a graduate adviser in biostatistics. Thereafter, the adviser will meet with the student each semester and discuss his or her academic program. A program of study must be approved by the graduate adviser in biostatistics.

1. Complete Statistics 560, 670A, 670B with no grade less than B in each course. These are core statistics courses.
2. Complete Statistics 680A and 680B with no grade less than B in each course. These are biostatistics concentration courses.
3. Complete at least six units of courses in biostatistics and statistics, selected from the following with the approval of the graduate adviser in biostatistics: Statistics 510, 520, 570, 596, 672, 673, 676, 677, 678, 679, 696, 700, 701, 702.
4. Complete at least six units of 500-level or graduate courses from a science of application of biostatistics (e.g., bioscience, health science, or medical science), selected with the approval of the graduate adviser in biostatistics. If the student has an undergraduate degree in an area of application of biostatistics, 500-level or graduate mathematical sciences courses may be substituted with the approval of the graduate adviser in biostatistics.
5. With approval of the graduate adviser and the faculty member who will chair the thesis committee, the student may choose Plan A and complete three units of Statistics 799A. The chair of the thesis committee must be a faculty member from the division of statistics in the Department of Mathematics and Statistics. One of the other two members of the thesis committee must be a faculty member from a science of application of biostatistics (i.e., bioscience, health science, or medical science). The student must pass an oral defense of the thesis, open to the public.
6. In other cases, Plan B will be followed. Students who choose Plan B are required to complete at least two units of Statistics 795, one unit of Statistics 720 or 790 or one additional unit of 795, and pass a comprehensive written examination. Policy and procedures for the Plan B examination are documented and available from the Department of Mathematics and Statistics.

In other cases, Plan B will be followed. Students who choose Plan B are required to complete at least two units of Statistics 795, one unit of Statistics 720 or 790 or one additional unit of 795, and pass a comprehensive written examination. Policy and procedures for the Plan B examination are documented and available from the Department of Mathematics and Statistics.

**Courses Acceptable on Master's Degree Programs in Statistics (STAT)**

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:** Statistics 550, 551A, or 551B are not acceptable on the Master of Science degree in Statistics.

Proof of completion of prerequisites required for all upper division courses: Copy of transcript.

**STAT 510. Applied Regression Analysis (3)**
Prerequisite: Statistics 250 or comparable course in statistics.
Methods for simple and multiple regression models, model fitting, variable selection, diagnostic tools, model validation, and matrix forms for multiple regression. Applications of these methods will be illustrated with SAS, SPSS, and/or S-Plus computer packages.

**STAT 520. Applied Multivariate Analysis (3)**
Prerequisite: Statistics 350A or comparable course in statistics.
Multivariate normal distribution, multivariate analysis of variance, principal components, factor analysis, discriminant function analysis, classification, and clustering. Statistical packages will be adapted for data analysis.

**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)**
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 master'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 550 or 670B.
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.
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://ttf.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
David A. Morong, M.F.A., Associate Professor of Theatre, Television, and Film
Timothy A. Powell, Ph.D., Associate Professor of Theatre, Television, and Film
Louisa E. Stein, Ph.D., Assistant Professor of Theatre, Television, and Film

Associateships and Assistantships
Graduate teaching associateships and graduate assistantships are available to a limited number of qualified students. Application forms and further information may be obtained from the school.

General Information
The School of Theatre, Television, and Film offers graduate study leading to the Master of Arts degree in television, film and media production. The degree prepares students for careers in creative areas of media design and production.

The School of Theatre, Television, and Film houses the Production Center for Documentary and Drama. Established in 1990, the center has produced over 305 national and regional television programs and non profit social, cultural, and institutional documentaries. These productions offer seniors and graduates opportunities to work in key roles (writer, director, line producer, crew, editor, composer, graphic design, etc.). The center exists to serve the school, university and community, to mentor senior and graduate film/video projects, and develop forums for their exhibition. An example is the Emmy Award-winning, “The Short List,” the long-running public TV showcase for U.S. and international short film, produced in the Production Center since 1992.

Filmmaker in Residence
The position of Filmmaker in Residence is unique in the CSU system. It was established to provide a professional link between the Television and Film program and the media industry in a rapidly evolving technological environment. The Filmmaker in Residence is the film and television producer, Jack Ofield.

Master of Arts Degree in Television, Film and New Media Production

The School of Theatre, Television, and Film, in the College of Professional Studies and Fine Arts, offers graduate study leading to the Master of Arts degree in television, film and new media production. This degree stresses hands-on creative endeavor. It is especially useful for those pursuing careers in film, television, radio, new media, or related production activities where sophisticated and disciplined ability to conceive, initiate and complete original media is required. Graduates of this program 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, TOEFL paper scores of 550 (or 213 online) or higher and a Certificate in Advanced English (CAE), indicating successful passage of the reading, writing, listening, and English usage test offered by the Cambridge English for Life (EFL) testing program. Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Theatre, Television, and Film.

**Graduate Admissions**

The following materials should be submitted together directly to:

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

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

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

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

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

**School of Theatre, Television, and Film**

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

- School of Theatre, Television, and Film
  (Attention: Graduate Adviser)
- San Diego State University
- 5500 Campanile Drive
- San Diego, CA 92182-7601

1. Three letters of recommendation. At least one letter from an academic reference and at least one letter from a professor or professional acquainted with the applicant's creative activities;

2. A resume that includes any film and/or video production experience you have had;

3. The best evidence applicant can provide of creativity relevant to media productivity. Technical skill level, and command of the medium. Generally, a sample reel is the most useful. The sample reel should be a DVD (NTSC, region 0 or 1) of work in which applicant held a key creative role (writer/director, cinematographer, editor, sound designer, production designer). Credits must be clearly indicated. Even though long work may be submitted, no more than 10 minutes of the work provided will be viewed, so cue, or specify appropriate cueing, of sample. In lieu of a sample reel, other examples might include a sample of original textual work (play, story, or screenplay for writers/directors) or visual material (drawings, storyboards, designs, or studio photography that may reflect lighting, framing, or composition skills);

4. A list, by author and title, of six books (novels, plays, essays) that have influenced applicant artistically;

5. A list of three films (narratives, documentaries, experimental), plays or television programs that applicant admires, devoting one paragraph to each work;

6. A list and description (in a sentence) of applicant's hobbies and interests outside of film, video, and theatre;

7. Personal Statement: A short essay describing your creative and career goals and how you think this program will benefit you. (Maximum two pages.)

Admission to the program is competitive, and satisfying these requirements does not guarantee admission. The decision to admit is based on consideration of the entire application file; promising applicants in unusual circumstances are encouraged to apply. Students accepted for graduate study in the Master of Arts degree in television, film and new media production must complete 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)**

Prerequisites: Television, Film and New Media 110, 360 or 361; and satisfaction of the English Placement Test and Writing Competency requirements.

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.

Prerequisites: Television, Film and New Media 322, and 360 or 361.

**Proof of completion of prerequisites required:** Copy of transcripts.

- 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.)
Television, Film and New Media Production

**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.

**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 360, 361, and 510 with grade of B (3.0) or better in each and consent of instructor. Proof of completion of prerequisites required: Copy of transcript.
Practicum in direction and production of dramatic and nondramatic film. Cameras, lighting, design, sound techniques, experience in university sponsored productions. Completion of a short film.

**TFM 561. Advanced Television (3)**
Two lectures and more than three hours of activity.
Prerequisites: Television, Film and New Media 360, 361, 510 with grade of B (3.0) or better in each and 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 569. Advanced Projects in Film and Video (3)**
Two lectures and more than three hours of activity.
Prerequisites: Television, Film and New Media 510, and 560 or 561. Original and creative work demonstrating significant achievement in film and video production. Maximum credit six units.

**TFM 571. Selected Topics in Director Studies (3)**
Prerequisite: Television, Film and New Media 310.
Historical significance 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.
Prerequisites: Open to television, film and new media majors only. Television, Film and New Media 122 and 123. Directing fundamentals and production to include script analysis, director’s preparation and directing actors. (Formerly numbered Television, Film and New Media 590.)

**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 (5)**
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.
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://ttf.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. Larlam, M.A., Professor of Theatre, Television, and Film
Peter F. Larlam, Ph.D., Professor of Theatre, Television, and Film
Loren P. Schreiber, M.F.A., Professor of Theatre, Television, and Film
R. Craig Wolf, M.F.A., Professor of Theatre, Television, and Film
Peter J. Cirino, M.F.A., Associate Professor of Theatre, Television, and Film
Donald J. Hopkins, Ph.D., Associate Professor of Theatre, Television, and Film
Denis J. Bedau, M.F.A., Assistant Professor of Theatre, Television, and Film
Denisa Blaznakova, 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) TOEFL score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).

Master of Fine Arts Degree in 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://ttf.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://ttf.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 resume 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.

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://ttf.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 32 units of core courses as follows: 1) three units selected from Theatre 540, 547, or 552; depending on student’s area of specialization; 2) Theatre 530A or 530B, 539, 610, 621, 644, 645; and 3) four semesters (12 units) of Theatre 643. The student must also complete 14 units of practicum, internship, and thesis/project consisting of Theatre 642 (must be taken for a total of four units), 746, 795 (must be taken for a total of four units), and 799A.

Fourteen units of electives selected by student and adviser from graduate level courses in the following areas: theatre, art, music, English and comparative literature, history, and television, film, and new media. In special circumstances courses acceptable for graduate credit in other departments may be selected with the approval of the student’s adviser.

Candidates must prepare a production thesis project approved by their thesis committee. This project must be supported by a written thesis project report (analysis/apologia).

Concentration in Musical Theatre

(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 four units), 600A, 600B, 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.

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 test 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 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 530B.

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.
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 master’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)
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)
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 lighting. 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.
Women’s Studies
In the College of Arts and Letters

OFFICE: Arts and Letters 346
TELEPHONE: 619-594-6524
http://www-rohan.sdsu.edu/dept/wsweb/masters.html

Faculty
Bonnie K. Scott, Ph.D., Professor of Women’s Studies, Chair of Department
Susan E. Cayleff, Ph.D., Professor of Women’s Studies (Graduate Adviser)
Anne Donadey, Ph.D., Professor of French and Women’s Studies
Esther D. Rothblum, Ph.D., Professor of Women’s Studies
Bonnie S. Zimmerman, Ph.D., Professor of Women’s Studies and Associate Vice President for Faculty Affairs
Elizabeth A. Colwill, Ph.D., Associate Professor of Women’s Studies
Huma Ahmed Ghosh, Ph.D., Associate Professor of Women’s Studies
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.
(2) 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.

TOEFL score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682). No graduate application will be considered complete without received GRE score.

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

Department of Women’s Studies
The following materials should be mailed or delivered to:
Department of Women’s Studies
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-8138

(1) Two letters of reference from individuals with direct knowledge of the applicant’s scholarly ability.

(2) A personal statement of background, intentions, and goals, including experience in women’s studies and with women’s issues, rationale for pursuing the M.A. degree, and relation of the M.A. degree in women’s studies to prior academic work and to career objectives.

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy, as stated in Part 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
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)
Prerequisite: Three upper division units in women’s studies.
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; theo- ries 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 Qur’an; 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 collision 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.

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 595. Seminar in Women’s Studies (3)
Prerequisites: Six upper division units in women’s studies and consent of instructor.
Directed research in women’s studies. Field of investigation will vary with instructor. Methods of investigation, development of bibliography, presentation of paper based on original research. See Class Schedule for specific content.

WMNST 596. Topics in Women’s Studies (3)
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 596, 496, 596 courses applicable to a bachelor’s degree. Credit for 596 and 496 applicable to a master’s degree with approval of the graduate adviser.

WMNST 597. Research Project (3)
Prerequisites: Six upper division units in women’s studies and consent of adviser.
Individual research project. May be taken in place of Women’s Studies 595, Seminar in Women’s Studies.
WMNST 598. Women's Studies Internship (3) Cr/NC
Prerequisites: Three upper division units in women's studies and consent of instructor.
Application of women's studies theories and scholarship to community service and activism. Internship includes 120 hours of work in local public and private agencies serving women and girls. Maximum credit six units.

GRADUATE COURSES

WMNST 601. Foundations of Feminist Scholarship (3)
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.
Explanation 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 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.
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.

**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.

**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.
Depiction of the Nazi policy of destroying European Jewry and its impact on the perpetrators, bystanders, victims, and the post-war world in feature films.
EUROP 560. Technologies and Methodologies: Language Learning and Teaching (3)
Two lectures and two hours of activity.
Prerequisite: Advanced level foreign language competency.
Understanding foreign language competencies; create and use technology-assisted learning and testing materials; review and evaluate foreign theories and methodologies.
EUROP 596. Topics in European Studies (3)
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.

**Humanities (HUM)**
*In the Department of Classics and Humanities*
*In the College of Arts and Letters*

**UPPER DIVISION COURSES**

HUM 596. Topics in Humanities (1-3)
Prerequisites: Upper division standing and consent of instructor.
Interdisciplinary topics in literature and the arts. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. No more than six units of 596 may be applied to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

HUM 599. Special Study (1-3)
Prerequisites: Consent of major or graduate adviser; to be arranged by department chair and instructor.
Directed individual study. Maximum credit six units.

**International Business (IB)**
*In the College of Arts and Letters and the College of Business Administration*

**UPPER DIVISION COURSE**

IB 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 (ISCOR)
In the College of Arts and Letters, the College of Professional Studies and Fine Arts, and the College of Sciences

**UPPER DIVISION COURSE**

ISCOR 575. Homeland Security (3)
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.)