Anthropology
In the College of Arts and Letters

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

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

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

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

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

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

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

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

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

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

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

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

Department of Anthropology
The following materials should be submitted by October 1 for admission for the spring semester and March 1 for the fall semester to:
Department of Anthropology
(Attention: Graduate Adviser) or
Graduate Affairs;
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4443

(1) A completed anthropology department application available at http://anthropology.sdsu.edu/docs/Anthro_application.pdf;
(2) A statement of purpose which should demonstrate a clear focus of research interests, to include both geographical and topical specialties. Must also include the names of at least two SDSU anthropology faculty who would be suitable thesis advisers (please use a separate sheet of paper for the statement of purpose);
(3) One copy of transcripts from all colleges and universities attended (these do not need to be sent directly from the colleges or universities; unofficial photocopies are acceptable);
(4) A copy of GRE scores. Photocopies or printouts from the ETS Web site are acceptable;
(5) An optional application for Graduate Assistant or Instructional Student Assistant positions available at http://anthropology.sdsu.edu/docs/Graduate_Aid.pdf;
(6) Three letters of recommendation from persons in a position to judge your academic ability. Letters may be e-mailed to Kathy Peck, Administrative Coordinator (kpeck@mail.sdsu.edu) or mailed directly to department. If paper copies are sent, we prefer that letters be sent to the applicant and included with other application materials. If your recommenders prefer to send letters directly to department, this is acceptable (though not preferred). In either case, letters should be received in sealed envelopes with recommender’s signature on back flap;
(7) A example of written work representative of your research and writing skills.

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

(1) Hold an acceptable baccalaureate degree from an accredited institution or equivalent as determined by the Division of Graduate Affairs;
(2) Have attained at least a 3.0 GPA on all work leading to the bachelor’s degree and subsequent post-baccalaureate coursework;
(3) Have been in good standing in the last institution attended; and
(4) Have a combined verbal and quantitative GRE (Graduate Record Exam) score of at least 950 and a minimum 4.0 on the analytic essay. Meeting the minimum requirements does not guarantee admission. All prospective applicants are reviewed by department faculty and ranked using a variety of criteria.
Applicants who meet the minimum admission requirements but who do not have a strong background in anthropology may be admitted conditionally. Conditionally admitted students will be required to complete specified courses in addition to the minimum 33 units required for the Master of Arts degree.

**Advancement to Candidacy**

All students must satisfy the general requirements for advancement to candidacy as described in Part Four of this bulletin. In addition, the department requires for either the General Anthropology specialization or the Applied Anthropology specialization that the student must:
(1) Complete all deficiency courses (needed only if admitted with conditional graduate standing);
(2) Complete all required coursework (except ANTH 799);
(3) Satisfy the foreign language requirement OR complete a sequence of at least one lower division, and one upper division course in statistics or GIS (with a grade point average of 2.5 or better);
(4) Maintain at least a 3.0 GPA in all other courses applied to the Master of Arts degree including any transfer credit;
(5) Form a thesis committee;
(6) Complete a thesis proposal and has it approved by your committee;
(7) Obtain human or animal subjects approval (if applicable);
(8) Submit a signed Appointment to Thesis Committee form to the graduate program adviser.

**Specific Requirements for the Master of Arts Degree**

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

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree as described in Part Four of this bulletin, students must complete a graduate program of at least 33 units of graduate courses with a 3.0 GPA that include the required courses listed below for each specialization. No more than three units of Anthropology 798, Special Study, and/or three units of Anthropology 799, Internship, may be used toward satisfaction of the degree. Courses required to remove undergraduate deficiencies and those used to fulfill the language or statistics requirements are in addition to the minimum 33 units required for the Master of Arts degree in anthropology.

**General Anthropology Specialization**

(SIMS Code: 110940)

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

**Applied Anthropology Specialization**

(SIMS Code: 110910)

1. Nine units selected from Anthropology 601, 602, 603, 604 (with no less than a grade of B). Only classified students may enroll in these courses;
2. Anthropology 605 (with no less than a grade of B);
3. One of the following methods courses: Anthropology 502, 505, 506, 507, 520, 531, 560, 561;
4. Anthropology 795, Internship in Anthropology (3-9) Cr/NC. Only classified students may enroll;
5. Anthropology 797, Research (3) Cr/NC/RP;
6. A minimum of nine units of coursework numbered 500 or above from any department determined in consultation with the student's thesis adviser;
7. Anthropology 799A, Thesis (3) Cr/NC/RP.

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

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

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

**UPPER DIVISION COURSES**

**ANTH 501. Primate Behavioral Ecology (3)**
Prerequisite: Anthropology 301.
Ecology and behavior of nonhuman primates to include history of primate ecological research, feeding ecology, predation, demography and dispersal, reproduction, conflict and cooperation, conservation as well as contemporary primatology.

**ANTH 502. Observing Primate Behavior (3)**
Two lectures and three hours of laboratory.
Prerequisites: Anthropology 301 and Anthropology 355 or 501. Methods of observation and analysis used in study of primate behavior. Behavioral observations of primates at the San Diego Zoo and review of literature in primatology. (Formerly numbered Anthropology 500.)

**ANTH 505. Human Osteology (3)**
Two lectures and three hours of laboratory.
Prerequisite: Anthropology 301.
Identification of individual bones and teeth; sex, age, and racial variation; stature reconstruction; continuous and discontinuous morphological variations; paleopathology. Training in observations, measurements, and analyses.

**ANTH 506. Osteology and Paleopathology (3)**
Two lectures and three hours of laboratory.
Prerequisite: Anthropology 505.
Conditions that result in bony pathological responses are often linked to cultural and environmental variables including habitual behaviors and diet. Will consider how these variables can be investigated through paleopathology and paleoepidemiology.

**ANTH 507. Forensic Anthropology (3)**
Two lectures and three hours of laboratory.
Prerequisite: Anthropology 505.
Anthropology within medicolegal context. Methodology used in forensic anthropology.

**ANTH 508. Medical Anthropology (3)**
Prerequisite: Anthropology 303.
Socio-cultural ecology of disease, medical health beliefs and practices in cultural context, and complexities of health care delivery in pluralistic societies.

**ANTH 510. Environmental and Ecological Anthropology (3)**
Prerequisite: Anthropology 303.
Ecological thinking in anthropology with focus on relationships between human environmental and ecological systems in tribal, peasant, and industrial societies. Cultural aspects of how and why human societies have maintained or undermined their ecosystems.

**ANTH 520. Ethnographic Field Methods (3)**
Prerequisite: Anthropology 303.
Problems and techniques of field work in ethnographic and social anthropological research; field work projects conducted using various qualitative and quantitative research techniques. Students work with informants in various settings.
ANTH 523. Anthropology of Politics and Power (3)
Prerequisite: Anthropology 303.
How anthropology investigates power as an underlying and primary force in human relations through cross-cultural study of political institutions, effects, and relationships of power in various societies.

ANTH 524. Cultural Dynamics of Religious Discourse (3)
Prerequisite: Anthropology 303.
Interplay of local and global religious discourses. Creativity of indigenous religious practices. Dynamics of missionization, including hybridization with local religious practices. Fundamentalist discourses as oppositional mediations between local and global identity formations.

ANTH 529. Urban Anthropology (3)
Prerequisite: Anthropology 303.
Urban adaptations of past and present societies. Descriptive topics and applied concerns regarding urban origins, migrations, kinship, ethnicity, stratification, and change. Ethnographic examples drawn from Western and non-Western societies.

ANTH 531. Methods in Applied Anthropology (3)
Prerequisite: Anthropology 303.
Anthropological concepts and methodologies to solve human problems in both western and non-western societies through intervention, community development, impact assessment, and cultural communication.

ANTH 532. Anthropology of Development and Conservation (3)
Prerequisite: Anthropology 303.
Anthropological perspectives on design, implementation, and assessment of development projects and conservation initiatives in “Third World.” Interlinkages between resource exploitation, underdevelopment, and local autonomy; and political and ethical dilemmas faced by anthropologists involved in projects.

ANTH 533. Race, Ethnicity, and Identity (3)
Prerequisite: Anthropology 303.
Theories and practices of race, ethnicity, and identity from a cross-cultural and anthropological perspective. History of race in US and other regions, focusing on how identities are constructed around concepts of difference.

ANTH 535. Sex, Gender, Kinship, and Marriage (3)
Prerequisite: Anthropology 303.
Anthropological theories and typologies relating to kinship and marriage systems, their history, their relationship to cultural practices, their implications for constraints on sexual practices, and their significance in definition of gender and gender hierarchies in world societies.

ANTH 536. Gender and Human Sexuality (3)
Prerequisite: Anthropology 303.
Constructions of gender and sexuality from anthropological perspective. Social constructions of body, norms, deviance, and medicalization of sexuality.

ANTH 537. Anthropology of Childhood (3)
Prerequisite: Anthropology 303.
Childhood in diverse cultural settings; evolutionary, biosocial, and health-related aspects of childhood; social and cultural uses of idea of childhood; enculturation and children’s relationship to material culture.

ANTH 540. Contemporary Cultures of Mesoamerica (3)
Prerequisite: Anthropology 303.
Utilizing ethnographic data explore growth and development of contemporary cultures of Mesoamerica from precontact to today. Countries may include Mexico, Belize, Costa Rica, El Salvador, Guatemala, Nicaragua, and Panama.

ANTH 560. Advanced Archaeological Field Techniques (3)
Six hours of activity.
Prerequisite: Anthropology 312.
Advanced projects in excavation and stabilization of ruins, archaeological surveys, laboratory analysis, preparation of reports, and act as unit supervisor. Course may be repeated with consent of instructor. Maximum credit six units.

ANTH 561. Archaeological Laboratory Methods (3)
Two lectures and three hours of laboratory.
Prerequisite: Anthropology 302.
Application of palynology, paleontology and relevant technologies. Individual laboratory research project required.

ANTH 580. Anthropological Data Analysis (3)
Prerequisite: At least one of the 300-level courses (Anthropology 301, 302, 303, and 304) and a statistics course.
Computer oriented data analysis class utilizing anthropological data sets.

ANTH 582. Regional Anthropology (3)
Prerequisite: Consent of instructor.
Study of societies in a major geographical region of the world such as Africa, the Arctic, East Asia, Europe, Latin America, the Middle East, North America, Oceania, or South Asia. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units.

ANTH 583. Topical Anthropology (3)
Prerequisite: Consent of instructor.
Study of a major subdiscipline such as political anthropology, economic anthropology, social anthropology, psychological anthropology, cultural ecology, applied anthropology, anthropological genetics, or environmental archaeology. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units.

ANTH 596. Topics in Anthropology (1-3)
Prerequisite: Consent of instructor.
Advanced topics in anthropology. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

ANTH 600. Seminar (3)
An intensive study in advanced anthropology. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

ANTH 601. Seminar in Biological Anthropology (3)
Prerequisite: Classified graduate standing.
History, theory, and current research in biological anthropology. Key literature from core topical areas such as primatology, paleoanthropology, human biology, bioarchaeology, and skeletal biology.

ANTH 602. Seminar in Archaeology (3)
Prerequisite: Classified graduate standing.
History and theory in archaeological data collection, analysis, and interpretation.

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

ANTH 604. Seminar in Linguistics (3)
Prerequisite: Classified graduate standing.
History and theory of linguistics stressing the significant literature on such topics as cultural cognition, descriptive linguistics, lexicostatistics, and transformational analysis.

ANTH 605. Seminar in Applied Anthropology (3)
Prerequisite: Classified graduate standing.
Use of anthropological theory and methods in solving contemporary social problems. Contemporary ethnographic examples from differing regions of the world reviewed to understand complexity and locally specific variables that must be addressed in proposing interventions and solutions.
ANTH 621. Seminar in Topical Anthropology (3)
Prerequisite: Twelve upper division units in anthropology.
Study of a major subdiscipline such as political anthropology, economic anthropology, social anthropology, psychological anthropology, cultural ecology, applied anthropology, race and variation, or environmental archaeology. Maximum credit six units applicable to a master's degree. May be repeated with new content. See Class Schedule for specific content.

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

ANTH 797. Research (3) Cr/NC/RP
Prerequisite: Classified graduate standing.
Independent investigation in the general field of the thesis.

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

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

ANTH 799B. Thesis Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis, 799A, with an assigned grade symbol of RP.
Registration required in any semester or term following assignment of RP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.
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. Ollman, M.F.A., Professor of Art, Design, and Art History, Director of School
Richard J. Baker, M.F.A., Professor of Art, Design, and Art History, Emeritus
Jo-Anne Berelowitz, Ph.D., Professor of Art, Design, and Art History (Graduate Adviser, Art History)
Richard A. Burkett, M.F.A., Professor of Art, Design, and Art History
Helen Z. Shirk, M.F.A., Professor of Art, Design, and Art History, Emeritus
Susan C. Merritt, M.F.A., Professor of Art, Design, and Art History
Kerry A. Nelson, M.S., Professor of Art, Design, and Art History
Ida K. Rigby, Ph.D., Professor of Art, Design, and Art History, Emeritus
Tina Marie Tapelli, M.A., Professor of Art, Design, and Art History
Richard C. Keely, M.F.A., Associate Professor of Art, Design, and Art History (Graduate Adviser, Studio Arts)
Robert A. Mansfield, M.F.A., Associate Professor of Art, Design, and Art History
Kotaro Nakamura, M.A., Associate Professor of Art, Design, and Art History
Sandra Lee Sherman, M.F.A., Associate Professor of Art, Design, and Art History
Mark J. Siprut, M.F.A., Associate Professor of Art, Design, and Art History
Kim Stringfellow, M.F.A., Associate Professor of Art, Design, and Art History
Nancy Deffebach, Ph.D., Assistant Professor of Art, Design, and Art History
Matthew G. Hebert, M.F.A., Assistant Professor of Art, Design, and Art History

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

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

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

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

Admission to Graduate Study
Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee by February 1. All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Art, Design, and Art History by the February 1 deadline.

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

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

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

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

Master of Fine Arts Degree in Art
Master of Arts (Studio Arts) Degree in Art
The following materials should be mailed or delivered by February 1 for admission for the fall semester to:

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

(1) School of Art, Design, and Art History application form. Contact the School of Art, Design, and Art History to obtain application form and instructions or refer to http://www.sdsu.edu/art to download the information;
(2) Statement of purpose addressing your professional goals and reasons for selecting the School of Art, Design, and Art History at SDSU for your pursuit of these goals;
(3) Artist statement which describes the nature or content of the work shown in the portfolio;

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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 [8]; 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 a bachelor’s degree in studio art or the equivalent from an accredited institution, including two 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 [8]; 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.
Students who do not meet the requirements for admission to the graduate program in art history but meet the requirements for graduate admission to the university, may, at the discretion of the art history faculty, be accepted with conditional standing.

Art History

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

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

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

Advancement to Candidacy

Studio Arts

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

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

Art History

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

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

Specific Requirements for the Master of Arts Degree

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

Studio Arts Concentration

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

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

Art History Concentration

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

Those electing art history must complete at least 15 units from the 600- and 700-numbered courses to include Art 799A, selected in consultation with the art history adviser. Students may select up to 15 units of 500-level courses in art, 12 units of which must be in art history and approved by the graduate adviser. The additional three units must be selected in consultation with the graduate adviser, to include Art 578 and 593 if these courses are not already completed. A written thesis is required as fulfillment of Art 799A. Master's candidates in art history will also be required to give an open lecture on their thesis subject, to be scheduled with the approval of the thesis chair.

Thesis and Projects in Art

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

Advanced Certificate in Museum Studies

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

Successful applicants must have completed a bachelor's degree from an accredited institution with a minimum grade point average of 3.0. A minimum grade point average of 3.0 must be maintained in certificate coursework with no less than a grade of C in any course. Courses taken in the certificate program with a grade of B or better may be applied to the Master of Arts degree in art history with the consent of the graduate adviser.

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

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

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

UPPER DIVISION COURSES

ART 500, Advanced Drawing (3)

Six hours.

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

Drawing emphasizing qualitative aspect of visual subject matter. Maximum credit six units.

ART 502, Inter-Media (1-3)

Two hours for each unit of credit.

Prerequisites: Art 102 and 103.

Process and materials in plane and space. Maximum credit six units. M.F.A. students: Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree.
ART 503. Life Drawing and Painting III (3)
Six hours.
Prerequisites: Art 204 and 403.
Drawing and painting from nude and costumed models. Maximum credit six units.

ART 504. Painting III (3)
Six hours.
Prerequisite: Six units of Art 404.
Approaches to contemporary concepts in painting. Maximum credit six units.

ART 506. Contemporary Issues for Studio Artists (3)
Prerequisites: Upper division or graduate standing in art and consent of instructor.
Theory, practice, and philosophy of being an artist. Independent research on current art concepts and issues. Material will encompass the past five years. Field trips.

ART 511. Printmaking III-Lithography (3)
Six hours.
Prerequisite: Art 411.
Advanced creative lithography printmaking in color. Emphasis on fine print quality in color process and color technology unique to this medium. Maximum credit six units.

ART 516. Sculpture III (3)
Six hours.
Prerequisite: Art 416.
Individual investigations into sculpture ideas, methods, and materials. Individual development in sculpture. Materials may include clay, metal, plastics, paper or wood. Maximum credit six units.

ART 517. Figurative Sculpture II (3)
Six hours.
Prerequisites: Art 216 and 217.
Figurative study with emphasis on individual exploration. Maximum credit six units.

ART 523. Furniture Design and Woodworking III (3)
Six hours.
Prerequisite: Six units of Art 423.
Advanced individual design. Exploration of materials, process and function. Continued focus on development of personal design statements and specialized techniques. Maximum credit six units.

ART 524. Digital Fabrication for Art and Design (3)
Six hours.
Prerequisite: A 300- or 400-level art or design course.
Design, visualization, and fabrication processes utilizing modeling and machining software. Basic techniques in computer-aided design (CAD) and computer-aided manufacturing (CAM). Small-scale production techniques and outsourcing for artists and designers. Maximum credit six units.

ART 525. Ceramics III (3)
Six hours.
Prerequisite: Art 425.
Study of ceramic design through creative projects of clay forms. Maximum credit six units.

ART 526. Clay and Glaze Technology in Ceramic Design (3)
Six hours.
Prerequisite: Art 425.
Experimentation and application of research concerning the use of ceramic materials and techniques as an integral part of the design process. Maximum credit six units.

ART 531. Jewelry and Metals IIIA-Jewelry (3)
Six hours.
Prerequisite: Art 431.
Problems involving fabrication processes already studied in order to increase technical competence while exploring personal design statements; specialized techniques such as photoetching and electroforming. Maximum credit six units.

ART 532. Jewelry and Metals IIIB-Metalsmithing (3)
Six hours.
Prerequisite: Art 432.
Advanced problems involving metal processes to increase technical competence while exploring personal design statements. Maximum credit six units.

ART 535. Fiber Construction II (3)
Six hours.
Prerequisite: Art 435.
Advanced study in nonloom techniques. Techniques to include: looping, braiding, plaiting, and special fabricating techniques. Experimentation with new man-made fibers and with synthetic commercial dyes. Maximum credit six units.

ART 536. Fiber Surface Design II (3)
Six hours.
Prerequisite: Art 436.
Application of design for the textile surface, appropriate for both the individual designer and commercial reproduction. Maximum credit six units.

ART 540. Advanced Photographic Imagery (3)
Six hours.
Prerequisites: Grade of C (2.0) or better in Art 339A, 339B, 339C, and two of the following: Art 441, 442, 450, 454. Computer proficiency required with working knowledge of vector graphics, page layout, digital image editing, web design, and motion graphics software consistent with current industry standards. Proof of completion of prerequisite required: Copy of transcript.
Strategy, planning, and problem solving related to visual communication systems with emphasis on social and cultural context.

ART 541. Graphic Design IV (3)
Six hours.
Prerequisites: Grade of C (2.0) or better in Art 339A, 339B, 339C, and four of the following: Art 340, 344A, 344B, 348, 349, 440, 444, 445, 450. Computer proficiency required with working knowledge of vector graphics, page layout, digital image editing, web design, and motion graphics software consistent with current industry standards. Proof of completion of prerequisite required: Copy of transcript.
Individual creative and scholarly research in typography, conceptual and contextual exploration, typographic experimentation based on theory, strategy, and problem solving. Maximum credit six units.

ART 543. Drawing and Illustration for Graphic Design III (3)
Six hours.
Prerequisites: Grade of C (2.0) or better in Art 443. Proof of completion of prerequisite required: Copy of transcript.
Strategy and problem solving of professional illustration as related to graphic design; individual conceptual and contextual exploration. Maximum credit six units.

ART 544. Emerging Technologies in Multimedia (3)
Six hours.
Prerequisite: Grade of C (2.0) or better in Art 344A, or 348, or 440, or 444, or 540.
Advanced design studies in emerging electronic communications, including cyberstudios, Internet and multimedia. Exploration in collaborative, interdisciplinary, and international projects. Maximum credit six units with consent of instructor.

ART 545. Design Studio (3)
Six hours.
Prerequisites: Grade of C (2.0) or better in Art 339A, 339B, 339C, and two of the following: Art 441, 442, 450, 454, 541, and portfolio review. Computer proficiency required with working knowledge of vector graphics, page layout, digital image editing, web design, and motion graphics software consistent with current industry standards. Proof of completion of prerequisite required: Copy of transcript.
Solutions to design problems for clients in a studio environment including business procedures and production management. Development of a professional level portfolio. Maximum credit six units with consent of instructor.

ART 546. The Art of the Book III (3)
Prerequisite: Art 446.
Design and creation of limited edition artist books made with mixed media and hand printing techniques such as letterpress, intaglio, woodcut, lithography, and photo. Maximum combined credit of 15 units for Art 346, 446, 546.
ART 571A. Modern Art of Latin America (3)
Prerequisites: Art 258 and 259.

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 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 advisor.
GRADUATE COURSES

ART 600. Drawing (3)  
Six hours. 
Prerequisite: Art 500. 
Concepts and approaches to drawing. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

ART 604. Painting (3)  
Six hours. 
Prerequisite: Art 504. 
Issues and concepts relating to contemporary painting. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

ART 609. Printmaking (1-3)  
Two hours for each unit of credit. 
Advanced creative work in selected printmaking media based upon the analysis of the history and philosophies of printmaking from its inception through contemporary concepts. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

ART 616. Sculpture (3)  
Six hours. 
Prerequisite: Art 516. 
Aesthetic organization of selected subject matter in the media of sculpture. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

ART 623. Advanced Furniture Design (3)  
Six hours. 
Prerequisite: Art 523. 
Problems in the design and construction of furniture. Projects determined by the individual students in conference with the instructor. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

ART 625. Crafts (1-3)  
Two hours for each unit of credit. 
Prerequisite: Six units completed in upper division courses in sculpture or ceramics or printmaking or a combination of these courses. 
Advanced creative work in selected craft media. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

ART 627. Advanced Clay and Glaze Technology in Ceramic Design (3)  
Six hours. 
Prerequisite: Art 525 or 526. 
Experimentation with use of ceramic material and techniques as an integral part of design process. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

ART 631. Jewelry and Metalwork (3)  
Six Hours. 
Prerequisite: Art 531 or 532. 
Problems in design and execution of works in precious metals. Projects will be determined by individual student in conference with the instructor. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

ART 634. Textile Design (3)  
Six Hours. 
Prerequisite: Art 536. 
Problems in textile design and technology. Projects determined by individual student in consultation with instructor. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

ART 641. Graphic Communication (1-3)  
Two hours for each unit of credit. 
Prerequisite: Art 541. 
Advanced individual study in graphic design. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

ART 642. Typography (3)  
Six hours. 
Prerequisite: Art 542. 
Advanced creative and scholarly research in typography for visual expression and communication; typographic experimentation based on theory, strategy, and problem solving. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

ART 644. Multimedia (3)  
Six hours. 
Prerequisite: Art 544. 
Creative applications of interactive and time-based visual expression using contemporary multimedia formats. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

ART 650. Creative Environmental Design (1-3)  
Prerequisite: Six upper division units in interior design, architecture or city planning. 
Creative work in interior design, architecture and civic design. Maximum credit six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.

ART 660. Seminar in Art History (3)  
Prerequisite: Graduate standing in art, art history, or related fields. 
Selected topics in art history. May be repeated with new content. 
Maximum credit six units applicable to a master’s degree.

ART 691. Curatorial Practice (3)  
Six hours. 
Prerequisites: Art 576 and 591. 
Practical experience in curatorship to include exhibition design/ installation and interpretive materials such as catalog essays, extended object labels, didactic panels, audio guides. Disseminate curatorial content and scholarship in contexts of galleries and museums and their online counterparts.

ART 694. Seminar in Principles of Design in Space Arts (3)  
Prerequisite: Art 558 or 559. 
Activity of creative expression and aesthetic appreciation in area of visual experience. Aesthetic analysis of original works of art. Maximum credit six units applicable to the M.A. degree.

ART 696. Advanced Topics in Art (1-3)  
Prerequisite: Consent of instructor. 
Intensive study in specific areas of art and art history. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

ART 697. Seminar in Curatorial Theory (3)  
Prerequisite: Art 578. 
Theories of exhibition development, curatorial methodologies and research, exhibition funding; curatorial responsibilities to include loan procedures, condition reports, environmental standards, collections storage; institutional structure of museums. Emphasis on role of curator in the twenty-first century.

ART 698. Seminar in Museum Administration (3)  
Prerequisite: Art 578. 
Museum administrative practices with emphasis on museum structure, organization, and governance; development and fundraising; collection management and curatorial issues; educational/outreach programming; importance of ethical considerations.
ART 700. Studio Art Experience (3)
Six hours.
Independent research in specified areas, which may require the presentation of a paper with its oral defense. Each letter designation may be taken for a maximum six units applicable to the M.A. degree; nine units applicable to the M.F.A. degree in art.
A. Studio Art in Painting
B. Studio Art in Sculpture
C. Studio Art in Printmaking
D. Studio Art in Ceramics
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
Marilyn Chin, M.F.A., Professor of English and Comparative Literature
Soonja Choi, Ph.D., Professor of Linguistics
Lei Guang, Ph.D., Professor of Political Science
Yoshiko Higurashi, Ph.D., Professor of Japanese
Ruth Xiaoru Liu, Ph.D., Professor of Sociology
Valerie O. Pang, Ph.D., Professor of Teacher Education
Paul Wong, Ph.D., Professor of Sociology and Dean of the College of Arts and Letters
Elena S. H. Yu, Ph.D., Professor of Public Health
Kathryn J. Edgerton-Tarpley, Ph.D., Associate Professor of History
Huma Ahmed Ghosh, Ph.D., Associate Professor of Women's Studies
Ryu Kitajima, Ph.D., Associate Professor of Japanese
Jeffrey S. McIlwain, Ph.D., Associate Professor of Public Affairs
Kotaro Nakamura, M.A., Associate Professor of Art, Design, and Art History
Sthaneshwar Timalsina, Ph.D., Associate Professor of Religious Studies
Ming-Hsiang Tsou, Ph.D., Associate Professor of Geography
Sandra A. Wawrytko, Ph.D., Associate Professor of Philosophy
Ruey-Jiuan Regina Wu, Ph.D., Associate Professor of Linguistics and Asian/Middle Eastern Languages
Zheng-sheng Zhang, Ph.D., Associate Professor of Chinese
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 Master of Arts degree in Asian studies is an interdisciplinary degree offered by designated faculty members in the Departments of Anthropology, Art, Business Administration, Classics and Humanities, Economics, Education, English and Comparative Literature, Geography, History, Linguistics and Asian/Middle Eastern Languages, Philosophy, Political Science, Religious Studies, and Sociology. It is administered by the Center for Asian and Pacific Studies through a graduate committee consisting of the director, the graduate adviser, and representatives from the several departments.

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

Admission to Graduate Study

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

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

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Center for Asian and Pacific Studies.

Graduate Admissions

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

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

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

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

Center for Asian and Pacific Studies

The following materials should be mailed or delivered to:
Center for Asian and Pacific Studies
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-6042

1. Letters of reference (minimum 3);
2. Personal statement;
3. Writing sample of recent academic work.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Four of this bulletin. In addition, all students must demonstrate a reading knowledge, at least at the intermediate level, of a relevant foreign language approved by the graduate adviser of the Center for Asian and Pacific Studies.

Specific Requirements for the Master of Arts Degree
(Major Code: 03011) (SIMS Code: 111101)
In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Four of this bulletin, the student must complete a minimum of 30 units from courses acceptable on master's degree programs, including Asian Studies 799A. The remaining 27 units to be selected, with departmental approval, from the list of approved courses in Part Five of this bulletin. In addition, any other Asian-content courses may be approved with approval of the graduate adviser.
The total program may not include more than 15 units in 500-level courses.
Only Plan A, requiring the thesis, is offered for the Master of Arts degree in Asian studies. A final oral examination on the general field of the thesis must be passed as a requirement for the degree.
All programs will be approved by the graduate committee of Center for Asian and Pacific Studies.

Courses Acceptable on Master's Degree Program in Asian Studies (ASIAN)
Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

UPPER DIVISION COURSES

ASIAN 530. Media and Popular Culture in the Asia Pacific (3)
Media and popular culture in Asia as instruments of social control, agencies of emancipation, expressions of global western power, and a means through which local identities are revitalized.

ASIAN 531. Spiritual and Intellectual Traditions in the Contemporary Asia Pacific (3)
Major thinkers or schools of Asian thought in modern times, reflecting East/West encounters and influences of global importance. Spiritual and intellectual aspects, cultural context, social/political/economic dimensions of the thinker or school and impact beyond the original culture.

ASIAN 596. Selected Studies in Asian Cultures (3)
Topics on various aspects of Asian studies. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. 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)*

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.
Astronomy

In the College of Sciences

OFFICE: Physics 131
TELEPHONE: 619-594-6182 / FAX: 619-594-1413
E-MAIL: astro@sciences.sdsu.edu
http://minitaka.sdsu.edu

Faculty
Allen W. Shafter, Ph.D., Professor of Astronomy, Chair of Department
Eric L. Sandquist, Ph.D., Professor of Astronomy
Douglas C. Leonard, Ph.D., Associate Professor of Astronomy
Jerome A. Orosz, Ph.D., Associate Professor of Astronomy
(Graduate Adviser)
William F. Welsh, Ph.D., Associate Professor of Astronomy
Robert W. Leach, Ph.D., Resident Astronomer

Associateships
Graduate teaching associateships in astronomy are available to a few qualified students. A limited number of graduate research assistants are also available from the department or through faculty with funded research projects. Application for teaching associate or graduate research positions is done as part of the student’s application for Admission to Graduate Study.

General Information
The Department of Astronomy offers graduate study leading to the Master of Science degree in astronomy. The degree is designed to prepare students either for further graduate work leading to the doctorate, or for a professional career in teaching or in industry.

San Diego State University operates the Mount Laguna Observatory, which is located 45 road miles east of the campus at an elevation of 6100 feet. The research telescopes at the observatory include three reflectors with apertures of 40 (two) and 24 inches. One 40-inch telescope is operated jointly with the University of Illinois and the other with the University of Kansas. Equipment for the telescopes includes CCD and Near-IR cameras for direct imaging, CCD spectrographs, and photoelectric photometers. A dormitory for observers and a 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 photometry and spectroscopy at the observatory. Stellar evolution is further studied with photometry of star clusters. The stellar content of nearby galaxies is probed through observations of novae and low-mass x-ray binaries contained within these systems. Galaxies are investigated through surface photometry using direct imaging. The department also has a strong CCD instrumentation program. Graduate students are extensively involved in many of these research programs. Students make use of observatory facilities in support of their thesis research.

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

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

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

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

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

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

Department of Astronomy
The following materials should be mailed or delivered to:
Department of Astronomy
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1221

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

All students must satisfy the general requirements for advancement to candidacy as specified in Part Four of this bulletin. If the student's undergraduate preparation is deficient, he/she will be required to take courses for the removal of the deficiency. These courses are in addition to the minimum of 30 units for the master's degree.

Specific Requirements for the Master of Science Degree

(Major Code: 19111) (SIMS Code: 770501)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must also meet the following departmental requirements in a 30-unit program:

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.
Survey of observational data for determining structure of binary stars, including luminosity functions, stellar distributions, solar motion, heliocentric motion, and peculiar stellar motions.

ASTR 620. Galactic Structure (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 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.
Observation of 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.
Survey of basic observational data for determining structure of Solar motion, stellar populations, kinematics and dynamics of galaxies. Current interpretations of peculiar galaxies and QSO. The extragalactic distance scale. Observational cosmology.

ASTR 680. Astronomical Techniques (3)
Prerequisites: Astronomy 350 and 450.
Basic methods of data acquisition and analysis. Emphasis is given to CCD direct imaging, spectroscopy, and photometry. Direct experience with telescopes and instruments at Mount Laguna Observatory, as well as with the department computing and image processing facility.

ASTR 790A. Research Paper (3) Cr/NC/RP
Prerequisites: An officially appointed research project committee and advancement to candidacy.
Preparation of a scientific paper, based on original astronomical research, suitable for publication in a refereed astronomical journal.

ASTR 790B. Research Paper Extension (0) Cr/NC
Prerequisite: Prior registration in Astronomy 790A with an assigned grade symbol of RP.
Registration required in any semester or term following assignment of a Research Course 790A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed research paper is granted final approval.

ASTR 797. Research (1-3) Cr/NC/RP
Prerequisite: Classified graduate standing.
Research in one of the fields of astronomy. Maximum credit six units applicable to a master's degree.

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

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

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

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

OFFICE: Speech, Language, and Hearing 221
TELEPHONE: 619-594-7746 / FAX: 619-594-7109
http://chhs.sdsu.edu/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 clinic instruction, provide research experiences, or are available as members of joint doctoral committees and advisers for student doctoral projects.

San Diego State University:
Steven J. Kramer, Ph.D., Professor of Speech, Language, and Hearing Science and Director of Program (Graduate Adviser)
Carol L. Mackersie, Ph.D., Professor of Speech, Language, and Hearing Sciences
Laura Dreisbach Hawe, Ph.D., Associate Professor of Speech, Language, and Hearing Sciences
Peter Torre, III, Ph.D., Associate Professor of Speech, Language, and Hearing Sciences
Jacque J. Georgeson, Au.D., Audiology Clinic Director

University of California, San Diego:
Director: Erika M. Zettner, Ph.D.
Faculty: Benitez, Bosch, Harris, Hicks, Keithley, Lin, Mattson, Meier, Nguyen, Ryan, Viirre

Doctoral Program

General Information
(Major Code: 12202) (SIMS Code: 550191)

A professional doctorate in audiology (Au.D.) is offered jointly by San Diego State University (SDSU) and the University of California, San Diego (UCSD). The joint doctoral program in audiology is accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology. The Au.D. program is a four-year graduate degree program designed for individuals who intend to specialize in clinical practice and to meet professional standards requiring a clinical doctorate as the entry-level degree for a certified audiologist. Graduates of this program will have the knowledge base, research exposure, and advanced clinical skills to enter the workforce in any setting, and will be prepared to function as independent audiology professionals in the expanding health care arena. The program encompasses academic, clinic, and research experiences in audiology and otology through the combined resources from the School of Speech, Language, and Hearing Sciences at SDSU and the Division of Surgery (Otalaryngology) in the School of Medicine at UCSD. An Au.D. provides the essential education, technical training, research, and creative experience necessary for professional activity, college-level teaching, and preceptoring.

Admission to the Au.D. Program

Students will apply to the Au.D. joint doctoral program through SDSU. It is expected that students will come into this program from a variety of different science backgrounds, including speech, language, and hearing sciences, biological and physical sciences, engineering, psychology, nursing, or a pre-med curriculum. Applicants for admission to the Au.D. program must meet the general requirements for admission to both universities with classified graduate standing as outlined in the respective catalogs. Applicants must also meet the special requirements of this program. These include (a) submission of scores on the GRE with satisfactory performance on both quantitative and verbal portions of the examination; (b) prerequisite completion of at least one course in statistics, one course in biological science, one course in physical science, one additional course in biological or physical science, two courses in behavioral/social sciences, and one course in American Sign Language. Deficiencies in these areas may be completed after admission to the program if approved by the admissions committee.

Applicants must submit transcripts of all post-secondary coursework, three letters of recommendation from former or current professors, supervisors, or other appropriate persons able to judge their academic potential, and an applicant essay (statement of purpose) indicating their interests and strengths relative to their career objectives. Details of these requirements are available on the school’s Web site. Assuming that students meet the requirements for admission outlined above, each student admitted to the program will have a program advisor evaluate their preparation in view of their needs and career goals, as well as professional certification requirements.

Applicant files are reviewed as a group by an Admissions Committee composed of Au.D. program faculty from each campus. Other Au.D. program faculty may review files and make recommendations to the Admissions Committee. Given the limited number of spaces available (10 new admissions each year are anticipated, subject to available facilities), the Admissions Committee will select the best-qualified applicants to fill the available spaces. No minimum set of qualifications will guarantee an applicant admission to the program. The Admissions Committee will make recommendations for admission to the graduate deans from each campus.

Application. Students seeking admission to the Au.D. program should consult the school’s Web site. For additional information, write directly to the Au.D. Program Directors, School of Speech, Language, and Hearing Sciences (Mail Code 1518), San Diego State University, 5500 Campanile Dr., San Diego, CA 92182.

Students will be admitted to the Au.D. program only in the fall semester (first year is at SDSU). Complete applications must be received by January 20 to be considered for the program beginning in the following fall semester. International students should submit materials by January 6.

Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the application fee. Indicate “Audiology (AUD)” as your Major/Program Objective. Indicate “Doctorate” as the Degree Objective. See Web site for other required application materials.

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

Graduate Admissions

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

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

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

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

2. GRE scores (http://www.ets.org, SDSU institution code 4682);
School of Speech, Language, and Hearing Sciences

The following materials should be mailed or delivered (must be received by January 20) to:
School of Speech, Language, and Hearing Sciences
Au.D. Joint Doctoral Program
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1518
(1) Complete the School of Speech, Language, and Hearing Sciences application online. Submit it online and also print it and include it with your supplemental materials;
(2) Applicant essay: See Guidelines for the Applicant Essay on the Web site;
(3) Three letters of recommendation. Note: There is no recommendation form. Recommendation letters are to be sent with the application packet in sealed envelopes signed across the sealed flap by the person writing the letter.
(4) Include your resume of experiences applicable to this field, and copies of relevant abstracts/papers published by you (optional).

Post Master’s Degree Admissions
Students admitted to the Au.D. program with a master’s degree in audiology will be expected to complete the four-year Au.D. curriculum. However, some students may have had a master’s preparation in audiology in which some of the coursework was similar to some of the foundation courses in the Au.D. program. Upon entering the program, each individual will be assessed to determine competencies/knowledge in material that would put them on par with expectations for the Au.D. program. For some of the foundation core courses offered the first year at SDSU, e.g., Audiology 705, 710, 725, students may be given credit for the courses or be required to substitute a Doctoral Special Study (Audiology 798) course for one or more of these courses to ensure competencies or remediate deficiencies if approved by the program faculty. Credit for some of the first year clinic units may also be approved based on work experience; however, a full-complement of expected clinical skills must be demonstrated.

Specific Requirements for the Au.D. Degree

Upon admission to the program, each student will be assigned a faculty adviser. The faculty adviser will help the student select a program of study to meet all program requirements. The Au.D. program is a four-year program, including summer semesters after years 1 through 3. An exact unit minimum is not specified due to the mixing of semester units (SDSU) and quarter units (UCSD) and differences in clinical hours at different settings; however, the program is approximately 134 semester-equivalent course units. All students in the Au.D. program will fulfill the following requirements. Any alternative method of fulfilling these requirements requires advanced written permission from the program directors.

Residency Requirements. After formal admission to the Au.D. program, the student must complete a minimum of course hours equivalent to one year’s full-time enrollment at each campus. The definition of residence must be in accord with the regulations of San Diego State University and the University of California, San Diego. The program is designed to be shared, as equally as possible, between the two campuses. The first year is entirely at SDSU, the second year is entirely at UCSD, and the third year will have options from both campuses. The fourth year of the program will be a full-time clinical externship at a program-approved clinic agency/site. Both campuses will share equally in the academic, clinic, and research components of the program.

Course Requirements. The program for each student will consist of 14 core courses, half of which are to be taken at each campus, and 14 elective courses, with a minimum of four to be taken at each campus. The student’s faculty adviser must approve all courses. The student who earns less than a 3.0 grade point average in academic coursework in any given term will be placed on academic probation for the next term. If, at the end of the probationary term, the student fails to achieve a 3.0 grade point average in academic coursework, the student will be subject to disqualification from the program. Students who earn less than a 3.0 grade point average in the spring term of the third year will be required to complete an independent study course concurrently with their fourth year externship.

Clinic Requirements. Each student will progress through a variety of clinical experiences involving patient assessment and management throughout their program of study. Clinic experiences will require concurrent enrollment in clinic courses appropriate for the campus in which they are doing the clinical work. These supervised clinical experiences are completed in the SDSU Audiology Clinic, UCSD Otology Clinics, and in community field sites. Clinic courses may be repeated as needed and require adviser approval prior to enrollment. Students must earn an overall grade of B or higher to pass clinic courses. Students are assessed across the following clinical skill categories: 1) professionalism; 2) patient interaction; 3) evaluation; 4) treatment; 5) documentation. Prior to the fourth year externship, each student will complete approximately 700 hours of clinic experience.

Preceptorship in Otology. All students will have at least one quarter of a clinical rotation with otology staff associated with UCSD. Students will accompany one of the otology faculty during their clinics and receive training in one or more of the following areas: clinical otology, pre-and post-operative assessment of patients, pharmacology related to otology, design and implementation of clinical trials with balance disorders, and pediatric otology.

Clinical Staffings. In addition, all students will be required to regularly participate in formal clinical case study/staffing experiences. At SDSU, these clinical staffings include student and faculty presentations and discussions of interesting cases seen in their clinics. At UCSD, these staffings include, the Chairman’s Conference, where Au.D. students/residents and medical staff discuss otologic problem cases and disorders, and the Neurotology Conference, where UCSD and community physicians, and students/residents discuss cases dealing with neurological diseases and vestibular disorders.

Fourth Year Externship. The fourth year externship is a full time clinical experience in an approved agency/site. These externships may require a competitive interview process by the agency. Externship sites may be in other parts of the country. All students in their fourth year externship must also enroll in the on-line clinical seminar at SDSU each semester.

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

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

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

(2) Second Year Evaluation: Students must have achieved a cumulative grade point average of 3.0 for core and elective courses, and have appropriate clinical skills. The student’s ability to integrate the academic and clinic procedures appropriate for the end of the second year will be assessed through a Second Year Qualifying Examination...
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 coursework, laboratory rotation, and clinic requirements for Year 1 and Year 2 (with a minimum grade point average of 3.0), satisfactory performance on the first and second year evaluations, and approval of the doctoral project proposal. Students cannot enroll in the doctoral project course, take the comprehensive examination, or register for their externship until advanced to candidacy. The program’s Executive Committee recommends students eligible for advancement to candidacy to the graduate deans of both institutions.

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

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

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

Courses Acceptable on Au.D. Degree Program in the School of Speech, Language, and Hearing Sciences (AUD)
Refer to Courses and 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 knowledge necessary to perform basic audiologic assessment, including otoscopy, pure-tone, masking, speech, and immittance measures, testing and patient counseling. Hands on experiences with different tests and equipment.

AUD 710. Hearing Amplification I (4)
Three lectures and two hours of activity.
Prerequisite: Admission to doctoral program.
Hearing aid components and signal processing, electroacoustic analysis, prescriptive techniques, verification procedures, hearing aid orientation, follow-up and troubleshooting.

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

AUD 715. Diagnostic Audiology II (3)
Two lectures and two hours of activity.
Prerequisite: Audiology 705.
Advanced procedures, including video-otoscopy, cerumen management, multiple component tympanometry, tests for 8th nerve, non-organic, and central involvement, and calibration. Principles and procedures for otoacoustic emission measurements (OAEs). Pathologies as they relate to audiologic measures.

AUD 720. Auditory Evoked Potentials I (4)
Prerequisites: Audiology 702 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 audiologic, auditory processing disorders, counseling of patient and family, and assistive listening devices.

AUD 795. Research Practicum (3) Cr/NC
Prerequisites: Admission to doctoral program and consent of instructor.
Participation in specific faculty research activities. Research methods and objectives of a specific research laboratory. Data collection and analysis.

AUD 798. Doctoral Special Studies (1-3) Cr/NC
Prerequisites: Admission to doctoral program and consent of instructor.
Individual study in field of specialization.

AUD 800. Instrumentation in Audiology/Hearing Science (3)
Two lectures and two hours of activity.
Prerequisites: Audiology 710 and 720.
Advanced concepts and hands-on experiences with different audiological instruments to improve diagnostic skills in behavioral and physiologic tests. Calibration techniques and instrumentation. Critical thinking, reasoning, and problem-solving skills pertaining to equipment use and testing parameters.
AUD 801. Clinical Practice II (1-2)
One unit represents three hours per week.
Prerequisites: Open to third year doctoral students and consent of instructor.
Diagnostics and hearing aid evaluations/fittings in the on-campus audiology clinic. May be repeated. Maximum credit three units.

AUD 805. Seminar in Vestibular Physiology, Assessment, and Rehabilitation (3)
Prerequisite: Open to second year doctoral students.
Advanced physiology, principles, and procedures for balance system assessment. Posturography and rotation chair measures, and dynamic visual acuity testing. Discussion and integration of information from variety of tests as a basis for diagnosis, treatment, and rehabilitation.

AUD 810. Seminar in Amplification Research and Technology (2)
Amplification, advances in hearing aid analysis, selection and verification techniques, advanced hearing aid signal processing strategies, programmable and digital technology, sensory aids for special applications.

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

AUD 820. Aural Rehabilitation and Counseling (3)
Prerequisite: Admission to doctoral program.
Human context of hearing impairment and management; possibilities and limitations of hearing aids, cochlear implants, speechreading, and assistive devices in minimizing disability, and psychosocial factors that determine handicap and outcome of audiological intervention.

AUD 821. Clinical Case Studies and Staffings II (1)
Prerequisite: Concurrent registration in Audiology 801 or 831.
Clinical cases and issues relative to clinical practice. Students’ clinical experiences discussed relative to medical and audiological assessment and management.

AUD 825. Seminar in Professional Issues (2)
Prerequisites: Audiology 701, 710, 715, 720, 725.
Ethical and legal issues, preferred practice standards, supervision, and private practice, employment and business consideration, including hearing aid dispensing.

AUD 830. Seminar in Contemporary Topics in Audiology and Hearing Science (1)
Prerequisite: Open to third year doctoral students.
Audiology and hearing science. Reading and critiquing journal articles and data emerging from research laboratories.

AUD 831. Field Clinical Practice (3-6)
One unit represents four hours per week.
Prerequisites: Open to third year doctoral students and consent of instructor.
Supervised practicum in one or more approved community agencies. May be repeated.

AUD 835. Psychoacoustics (3)
Prerequisite: Admission to doctoral program.
Psychophysical concepts underlying clinical audiology. Psychoacoustic abilities of individuals with normal hearing and sensorineural hearing loss. Practical experience in conducting psychoacoustic tests.

AUD 840. Auditory Evoked Potentials II (2)
Prerequisite: Audiology 720.
Advanced techniques in measurement of otoacoustic emissions and later auditory evoked potentials. Otoacoustic emission level dependence, group delay, and suppression; middle latency and steady-state responses, cortical auditory evoked potentials (N1-P2), and auditory event-related potentials (MMN, P3).

AUD 845. Hearing Conservation (2)
Prerequisites: Audiology 700 and 705.
Hearing conservation programs in various settings. Current research on occupational noise exposure and hearing loss and workers’ compensation coverage of hearing loss.

AUD 871. Externship in Audiology (10)
Prerequisite: Advancement to candidacy.
Full-time clinical externship at approved agency. Continuation and intensification of clinical experiences with reduced amount of direct supervision culminating in ability to work independently. Maximum credit 30 units.

AUD 891. On-Line Integrative Clinical Seminar (2)
Prerequisites: Advancement to candidacy and consent of adviser.
On-line discussion of clinical experiences and interesting cases. Maximum credit six units.

AUD 897. Independent Research (1-3) Cr/NC/RP
Prerequisite: Consent of adviser.
Research in audiology or hearing science. Maximum credit three units applicable to the audiology degree.

AUD 899. Doctoral Project (1-3) Cr/NC/RP
Prerequisites: Audiology 712 and advancement to candidacy.
Individual investigation and preparation of the doctoral project for the audiology degree.
Bioinformatics and Medical Informatics

In the College of Sciences

OFFICE: Geology/Mathematics/Computer Science 625
TELEPHONE: 619-594-4573
E-MAIL: faramarz@sciences.sdsu.edu

Associated Faculty

Faramarz Valafar, Ph.D., Associate Professor of Computer Science, Director of Bioinformatics and Medical Informatics
Willa Fields, D.N.Sc., Professor of Nursing
Roberta A. Gottlieb, M.D., Professor of Biology
Richard A. Levine, Ph.D., Professor of Statistics
Kathleen L. McGuire, Ph.D., Professor of Biology
Ralph-Axel Mueller, Ph.D., Professor of Psychology
Claire Murphy, Ph.D., Professor of Psychology
Usma Sinha, Ph.D., Professor of Physics
William G. Tong, Ph.D., Distinguished Professor of Chemistry and Biochemistry
B. Mikael Bergdahl, Ph.D., Associate Professor of Chemistry and Biochemistry
Andrew J. Bohonak, Ph.D., Associate Professor of Biology
Scott Kelley, Ph.D., Associate Professor of Biology
Sunil Kumar, Ph.D., Associate Professor of Electrical and Computer Engineering
Chil-Dean Lin, Ph.D., Associate Professor of Statistics
John J. Love, Ph.D., Associate Professor of Chemistry and Biochemistry
Elizabeth R. Waters, Ph.D., Associate Professor of Biology
Robert W. Zeller, Ph.D., Associate Professor of Biology
Barbara Ann Bailey, Ph.D., Assistant Professor of Statistics
Elizabeth A. Dinsdale, Ph.D., Assistant Professor of Biology
Kelly S. Doran, Ph.D., Assistant Professor of Biology
Kristin A. Duncan, Ph.D., Assistant Professor of Statistics
Robert A. Edwards, Ph.D., Assistant Professor of Computer Science
Pamela Moses, Ph.D., Assistant Professor of Psychology

Adjunct Faculty

University of California, San Diego:
Lucila Ohno-Machado, M.D., Ph.D., Professor of Medicine
Gerard Hardiman, Ph.D., Associate Professor of Medicine
Hyeon-Eui Kim, Ph.D., M.P.H., R.N., Assistant Professor, Division of Biomedical Informatics
Christopher H. Woelk, Ph.D., Assistant Professor, Division of Biomedical Informatics

Genomics Institute of the Novartis Research Foundation:
Andrew I. Su, Ph.D., Computational Discovery
La Jolla Institute for Allergy and Immunology:
Bjoern Peters, Ph.D., Center for Infectious Disease
Anjano Rao, Ph.D., Signaling and Gene Expression Research
VA Hospital:
Alan Calvitti, Ph.D., System Biology
West Wireless Health Institute:
Hassan Ghazemzadeh, Ph.D., Research Engineering Group

General Information

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

The explosion in genomic information and in the elucidation of pathways of various types has created an unprecedented, but largely unmet need for professionals with working knowledge in 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 at 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 a principal 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 sciences become increasingly conceptual and quantitative.

Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee.
Students who do not meet all of the above requirements for admission with classified graduate standing may be admitted with conditionally classified graduate standing upon the recommendation of the research program. Students so admitted will be advised as to the nature of their deficiency and the time to be allowed to achieve full classified graduate standing. Conditions may include satisfactory passing of certain undergraduate courses. These courses will be in addition to the minimum of 33-38 units required for the program.

Graduate Admissions

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

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

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

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

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

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

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

Master of Science Degree in Bioinformatics and Medical Informatics

The following materials should be mailed or delivered to:

Bioinformatics and Medical Informatics (BIOMI) Graduate Program
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7720

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

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

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Four of this bulletin.

Specific Requirements for the Master of Science Degree

(Major Code: 07994) (SIMS Code: 771490)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete a program of study totaling 38 units for the concentration in professional science master and 33 units for the master of science as described below:

1. Complete 12 units of required core courses:
   - BIOL 510 Molecular Evolution (3)
   - BIOMI 568 Bioinformatics (3)
   - CHEM 560 General Biochemistry (3)
   - CS 600 Methods in Bioinformatics, Medical Informatics, and Cheminformatics (3)

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

   OR

   - CS 605 or COMP 614 Database Theory and Implementation (3)
   - COMP 605 Database Theory and Implementation (3)

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

   4. Six units of research including Thesis:
      - BIOMI 797 Research (3) Cr/NC/RP
      - BIOMI 799A Thesis or Project (3) Cr/NC/RP

Professional Science Master Concentration

1. Complete 12 units of required core courses:
   - BIOL 510 Molecular Evolution (3)
   - BIOMI 568 Bioinformatics (3)
   - CHEM 560 General Biochemistry (3)
   - CS 600 Methods in Bioinformatics, Medical Informatics, and Cheminformatics (3)

2. Complementary: Twelve units in a field complementary to the student's background with approval of the graduate coordinator selected from the following courses:
   - CHEM 567 Biochemistry Laboratory (3)
   - CS 514 Database Theory and Implementation (3)
   - CS 520 Advanced Programming Languages (3)
   - CS 535 Object-Oriented Programming and Design (3)
   - CS 605 or COMP 605 Scientific Computing (3)
   - COMP 605 Scientific Computing (3)

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

Courses Acceptable on Master's Degree Program in Bioinformatics and Medical Informatics (BIOMI)

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

UPPER DIVISION COURSE

BIOMI 568. Bioinformatics (3)
(Same course as Biology 568)
Two lectures and three hours of laboratory.
Prerequisite: Biology 366.
Bioinformatics analysis methods and programming skills. Practical bioinformatic software for sequence analysis, bioinformatic algorithms and programming fundamentals.

GRADUATE COURSES

BIOMI 600. Methods in Bioinformatics, Medical Informatics, and Cheminformatics (3)
(Same course as Computer Science 600)
Prerequisites: Three units of calculus and graduate standing.
Computer, mathematical, and engineering techniques for bioinformatics, cheminformatics, and medical informatics. Techniques used in microarray data analysis, gene and protein sequence alignment, and classification techniques in medical decision making.
BIOMI 797. Research (1-3) Cr/NC/RP
Prerequisite: Consent of instructor.
Research in one of the fields of bioinformatics and medical informatics. Maximum credit six units applicable to a master’s degree.

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

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

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

OFFICE: Life Sciences 104
TELEPHONE: 619-594-6767 / FAX: 619-594-5676
http://www.bio.sdsu.edu

Faculty

Terrence G. Frey, Ph.D., Professor of Biology,
Chair of Department
Andrew J. Bohonak, Ph.D., Associate Professor of Biology,
Vice Chair of Department
Todd W. Anderson, Ph.D., Professor of Biology
(Graduate Adviser, Ecology)
J. David Archibald, Ph.D., Professor of Biology
Sanford I. Bernstein, Ph.D., Professor of Biology
Annalisa Berta, Ph.D., Professor of Biology
(Graduate Adviser, Evolutionary Biology Ph.D. Program)
Richard L. Bizzozo, Ph.D., Professor of Biology
Michael J. Buono, Ph.D., Professor of Biology
Kevin Burns, Ph.D., Professor of Biology
(Graduate Adviser, Evolutionary Biology)
Douglas H. Deutschman, Ph.D., Professor of Biology
Christopher C. Glembotski, Ph.D., Professor of Biology
(Graduate Coordinator, Biology)
Ricardo Zayas, Ph.D., Assistant Professor of Biology
(Graduate Adviser, Molecular Biology)

Kevin A. Hovel, Ph.D., Associate Professor of Biology
Brian T. Hentschel, Ph.D., Associate Professor of Biology
Matthew S. Edwards, Ph.D., Associate Professor of Biology
Mark A. Sussman, Ph.D., Distinguished Professor of Biology
Constantine Tsoukas, Ph.D., Professor of Biology
(Graduate Adviser, Evolutionary Biology)
Matthew S. Edwards, Ph.D., Associate Professor of Biology
Brian T. Hentschel, Ph.D., Associate Professor of Biology
Kevin A. Hovel, Ph.D., Associate Professor of Biology
Scott T. Kelley, Ph.D., Associate Professor of Biology
David Lipson, Ph.D., Associate Professor of Biology
Elizabeth R. Waters, Ph.D., Associate Professor of Biology
Kathy S. Williams, Ph.D., Associate Professor of Biology
Robert W. Zeller, Ph.D., Associate Professor of Biology
Rulon W. Clark, Ph.D., Assistant Professor of Biology
Elizabeth Dinsdale, Ph.D., Assistant Professor of Biology
Kelly Doran, Ph.D., Assistant Professor of Biology
Ralph Feuer, Ph.D., Assistant Professor of Biology
Chun-Ta Lai, Ph.D., Assistant Professor of Biology
Rebecca Lewison, Ph.D., Assistant Professor of Biology
Jeremy Long, Ph.D., Assistant Professor of Biology
Roland Wolkowicz, Ph.D., Assistant Professor of Biology
Ricardo Zayas, Ph.D., Assistant Professor of Biology

Associate Professors

Kevin Burns, Ph.D., Professor of Biology
(Graduate Adviser, Ecology)
J. David Archibald, Ph.D., Professor of Biology
Sanford I. Bernstein, Ph.D., Professor of Biology
Annalisa Berta, Ph.D., Professor of Biology
(Graduate Adviser, Evolutionary Biology Ph.D. Program)
Richard L. Bizzozo, Ph.D., Professor of Biology
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Christopher C. Glembotski, Ph.D., Professor of Biology
(Graduate Coordinator, Biology)
Ricardo Zayas, Ph.D., Assistant Professor of Biology
(Graduate Adviser, Molecular Biology)

Robert A. Gottlieb, M.D., Professor of Biology
(Graduate Adviser, Evolutionary Biology Ph.D. program)
Jacques Perrault, Ph.D., Professor of Biology
Robert S. Pozos, Ph.D., Professor of Biology
Tod W. Reeder, Ph.D., Professor of Biology
Forest Rohwer, Ph.D., Professor of Biology
Anca Mara Segall, Ph.D., Professor of Biology
(Graduate Adviser, Microbiology)

Michael G. Simpson, Ph.D., Professor of Biology
Mark A. Sussman, Ph.D., Distinguished Professor of Biology
Constantine Tsoukas, Ph.D., Professor of Biology
(Graduate Adviser, Molecular Biology)

Matthew S. Edwards, Ph.D., Associate Professor of Biology
Brian T. Hentschel, Ph.D., Associate Professor of Biology
Kevin A. Hovel, Ph.D., Associate Professor of Biology
Scott T. Kelley, Ph.D., Associate Professor of Biology
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Rebecca Lewison, Ph.D., Assistant Professor of Biology
Jeremy Long, Ph.D., Assistant Professor of Biology
Roland Wolkowicz, Ph.D., Assistant Professor of Biology
Ricardo Zayas, Ph.D., Assistant Professor of Biology

Graduate Admissions

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

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

(2) Students with international coursework must submit an evaluation report through one of these two companies:
Course-by-Course Evaluation Report or Detailed Report;
(3) GRE scores (http://www.ets.org, SDSU institution code 4682);
(4) English language score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).

Masters of Arts Degree in Biology
Masters 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
Biology

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.

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.

Ph.D. Degree in Biology (Cell and Molecular)
The following materials should be mailed or delivered to:

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

(1) Statement of professional goals;
(2) Resume or curriculum vitae;
(3) Department application
(http://www.bio.sdsu.edu/cmob/propsinfo.html, or may be obtained from the department);
(4) Three letters of recommendation in sealed and signed envelopes (form available online or may be obtained from the department).

Ph.D. Degree in Ecology

The following materials should be mailed or delivered to:

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

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

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

Ph.D. Degree in Evolutionary Biology

The following materials should be mailed or delivered to:

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

(1) Curriculum vitae or resume;
(2) Three letters of recommendation in sealed and signed envelopes.

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 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 may be selected from acceptable courses offered in the College of Education. A final oral examination in the field of the thesis and its implications in the broad fields of biology is also required.
Master's Degree Research Programs

Ecology (Major Code: 04021) (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): The program area is concerned with biology at the molecular level, with particular emphasis on the correlation of structure and function of macromolecules, catalysis and control, molecular genetics, regulation of gene expression, and the molecular basis of cellular architecture, cell movement, bioenergetics and membrane function (administered through Molecular Biology Institute). Program adviser, Tsoukas.

Physiology (Major Code: 04101) (SIMS Code: M.A. 771466; M.S. 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/cmob/propsinfo.html

The cooperating faculties of the Departments of Biology at the University of California, San Diego and at San Diego State University offer a joint doctoral program in biology (cell and molecular). The research interests of the participating faculty members cover a wide range of biological problems.

At SDSU, the major areas of research at the graduate level and the participating faculty members include:

- 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. Bizzoco.

Program

Undergraduate Preparation for Admission

Applicants for admission to the doctoral program offered jointly by UCSD and SDSU must present evidence of adequate preparation and capacity for advanced work in biology. There are no inflexible requirements for entrance to graduate study in this program, but a strong background in biology, mathematics, chemistry, and physics is recommended. The applicant must have a bachelor's degree or the equivalent from an accredited institution of higher learning with training comparable to that provided by the University of California's and San Diego State University's undergraduate programs. Admission to the program requires acceptance by each institution on recommendation of the participating departments at UCSD and SDSU. It is understood that acceptance of a student into the joint program by each of the departments will be conditioned by their respective standards for graduate admissions and also by available facilities.

Residency Requirements

After formal admission to the joint doctoral program, the student must spend at least one academic year in full-time residence at each of the two campuses. The definition of residence must be in accord with the regulations of the University of California, San Diego, and San Diego State University.

Advising Committee

Upon admission to the program the joint doctoral graduate adviser will establish an advising committee for the student. This committee will consist of three faculty members. In consultation with the student, the committee will develop the student's course of study and will establish the student's joint qualifying committee.

Course Requirements

There is no specific number of courses required for the doctoral program in biology, except a one-year graduate course including genetics, cellular and molecular biology. Prior to taking the qualifying examination, every student is expected to have a firm understanding of modern biological principles. Usually students will be expected to complete a set of at least four laboratory rotations, and such rotations may be fulfilled on either campus.

Coursework may be selected from offerings at either UCSD or SDSU.
Qualifying Examinations

Qualifying Committee

The qualifying committee consists of five faculty members, at least two from UCSD (one of whom must be a full-time faculty member in the Biology Department). The dissertation adviser may be a member of the qualifying committee. The members of the qualifying committee will be selected by the advising committee in consultation with the student. In order to provide continuity between examinations, at least one member of the qualifying committee shall be a member of the SDSU Executive Committee. Final appointment of qualifying committee members will be made jointly by the Graduate Deans of SDSU and UCSD.

The qualifying committee will be responsible for carrying out the qualifying examination, and the chair of this committee will report the outcome of the examination and any related academic recommendations to the Executive Committee. The chair will also provide a written evaluation of the student's performance. The chair of the qualifying committee is responsible for notifying the members of the time and place of the examination, and the student is responsible for obtaining all required documents necessary for the examination four weeks before the scheduled examination time.

Qualifying Examination

The examination will be administered in one session and consists of two parts.

First Part: Oral presentation of dissertation research results and proposed dissertation plan (duration is 40-50 minutes, similar to a formal seminar presentation, slides, etc.). The student should come prepared to defend the overall experimental design, including possible outcomes and interpretations, and be thoroughly familiar with the literature in his or her chosen field. A major portion of this examination will be devoted to background information so that a student can demonstrate the context in which the proposed research project lies. A succinctly written version of the proposed dissertation plan (maximum 14 double spaced pages) should be provided to committee members at least two weeks before the presentation. Prior written approval by all SDSU Qualifying Committee members stating that the written dissertation proposal is sufficiently developed must be obtained before the oral presentation takes place.

Second Part: In consultation with the members of the Qualifying Committee, the student will select two subject areas broadly related to the dissertation research. Two members of the Qualifying Committee with expertise in these areas will serve as primary mentors. The student will carry out literature research in each of the topics and select three to four research papers in each area to be discussed during the examination. Each of the papers to be discussed must meet the approval of the two primary mentors. The student will be expected to answer questions on the selected papers, relevant background, and potentially related topics. A major goal of this portion of the examination is to test the student's ability to extract information from the literature, to critically and objectively analyze this information, and to formulate a thorough knowledge base of the subject area.

The qualifying committee may specify a course of study to strengthen any weaknesses identified during the qualifying examination. Upon successful completion of the qualifying examination the student must make application to the Office of Graduate Studies at UCSD for advancement to candidacy. Upon payment of the candidacy fee to UCSD, and after approval by the graduate deans on both campuses, the office of Graduate Studies at UCSD will notify the student of advancement to candidacy.

Joint Dissertation Committee

After a student is admitted to candidacy, a dissertation committee consisting of at least five faculty members is nominated by the graduate advisers and appointed jointly by the Graduate Deans at SDSU and UCSD. The student's dissertation research adviser will be the chair of this committee. At least one member of this committee must be from SDSU and one member must be a full-time faculty member from UCSD.

Dissertation

Following successful completion of the qualifying examination, the major remaining requirement for the Ph.D. degree will be satisfactory completion of a dissertation consisting of original and significant research carried out under the guidance of a faculty member. Requirements currently in force at UCSD and SDSU must be met for completing and filing the dissertation.

Award of the Degree

The Doctor of Philosophy degree in biology will be awarded jointly by the Regents of the University of California and the Trustees of The California State University in the names of both institutions.

Financial Support

The Department of Biology at SDSU endeavors to provide adequate support for all students so that full time can be devoted to research, training, and study. During 2009-10, support package included tuition, a stipend (approximately $22,000-$24,000), health coverage, and funds for research supplies. All students are required to obtain teaching experience, which is normally accomplished by appointment as a graduate teaching associate.

Faculty

The following faculty members of the cooperating institutions participate in the joint doctoral program being available for direction of research and as members of joint doctoral committees.

San Diego State University:

Graduate Adviser: G. Harris
Faculty: Bernstein, Bizzoco, Dinsdale, Doran, Feuer, Edwards, Frey, Glembovski, Gottlieb, Harris, Huxford (Chemistry and Biochemistry), Kelley, Lipson, Love (Chemistry and Biochemistry), Maloy, McGuire, Paolini, Perrault, Rohwer, Segall, Stumph (Chemistry and Biochemistry), Susman, 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:

**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, 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 teaching, research, and study. Support includes tuition, a stipend, and funds for research supplies. All students are required to obtain teaching experience, which is normally accomplished by appointment as a graduate teaching associate.

**Faculty**

**Graduate Advisers:**

San Diego State University: W. Oechel
University of California, Davis: Sharon Lawlor

**SDSU Faculty:** Anderson, Bohonak, Clark, Dinsdale, Deutschman, Edwards, Hentschel, Hovel, Lai, Lewison, Long, McClennaghan, Oechel, Reeder, Regan, K. Williams

**Evolutionary Biology**

(Major Code: 04016) (SIMS Code: 771485)

The cooperating faculties of the Department of Biology, San Diego State University (SDSU) and the Graduate program in Evolution, Ecology, and Organismal Biology (EEOG) at the University of California, Riverside (UCR) offer a joint program in evolutionary biology leading to the Ph.D. The research interests of the participating faculty cover a wide range of topics in evolutionary biology.

**Program**

**Undergraduate Preparation for Admission**

Applicants for admission to the doctoral program must present evidence of adequate preparation and capacity for advanced work in evolutionary biology. Preparation should include a strong background in biology. Applicants must have a bachelor’s degree from an accredited college or university. Acceptance of a student into the joint program by each institution depends on meeting the standards of admission of the respective institutions and by available facilities for research and instruction.

**Residency Requirements**

After formal admission to the joint doctoral program, the student must spend at least one academic year in full time residence on each of the two campuses. The definition of residence must be in accord with the regulations of the University of California, Riverside, and San Diego State University.
Advising Committee
At the start of the student's first year in the program, the student will form a Guidance Committee. This committee will consist of four faculty members, two chosen from each institution. From SDSU, the committee must include the student's prospective dissertation advisor and an additional, programmatically appropriate, member. From UCR, the committee members will be drawn from faculty within the EEOB graduate program. In consultation with the student, the Guidance Committee plans the student's program through Advancement to Candidacy.

Course Requirements
The Guidance Committee works with the student to develop an individualized course of study and identify potential deficiencies. Students in the joint doctoral program will have similar requirements as students in UCR's EEOB graduate program. Specifically, the joint doctoral students will take the Theory of Evolution (UCR BIOL 216) and at least two disciplinary courses (see below; the two required disciplinary courses must cover different disciplines; at least one disciplinary course must be taken at UCR). In addition, the students will enroll in a current research topics seminar course during each quarter or SDSU semester of residence. The majority of required coursework 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:

Each quarter:
- UCR BIOL 265 Advances in Population and Evolutionary Biology (3)
- UCR BIOL 216 The Theory of Evolution (3)
- UCR BIOL 252 General Colloquium in Biology (or another disciplinary colloquium) (1)
- UCR BIOL 266 Advances in Population and Evolutionary Biology (3)
- UCR BIOL 211 Ecology: Genes to Ecosystems (3)
- UCR BIOL 212 Ecological Systems in Space and Time (3)
- UCR BIOL 213 Behavioral Ecology (3)
- UCR BIOL 214 Evolutionary Genetics (3)
- UCR BIOL 217 Population and Community Ecology (3)
- UCR BIOL 219 Theory of Systematics (3)
- UCR BIOL 220 Evolutionary Physiology (3)

At least one of the following courses:
- BIOL 624 Population Genetics (3)
- BIOL 740 Phylogenetic Systematics (3)

At least one of the following courses:
- UCR BIOL 740 Phylogenetic Systematics (3)
- UCR BIOL 745 Seminar in Ecology and Evolutionary Biology (3)
- UCR BIOL 795 Seminar in Ecology and Evolutionary Biology (3)
- UCR BIOL 900 Seminar in Ecology and Evolutionary Biology (1-3)

UErrER DIVISION COURSES

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, Hedlin, Kelley, Rohwer, Reeder, Simpson, Waters, Zeller.

Courses Acceptable on Master's and Doctoral Degree Programs in Biology (BIOL)

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

UPPER DIVISION COURSES

Writing Requirement: Completion of the Graduation Writing Assessment Requirement or the eligibility to enroll in an upper division writing course is a prerequisite for all upper division biology courses numbered 450 and above.

BIOL 508. Coevolution (3)
Prerequisites: Biology 352 and 354.
Coevolution in interspecific interactions, like herbivory, predation, parasitism, competition, pollination, and mimicry.

BIOL 509. Evolutionary Biology (3)
Two lectures and two hours of activity.
Prerequisite: Biology 352.
Evolutionary biology including genetics of populations, speciation, systematic biology, adaptation, role of development in evolution, evolution of behavior, and comparative biology. Evolutionary biology as the central organizing principle of biology.

BIOL 510. Molecular Evolution (3)
Prerequisites: Biology 352 and 366 or graduate standing.
Molecular evolution including concepts of homology and convergence, the nearly neutral theory of evolution, evolution of new protein function, detecting selection, multi-gene family evolution and evolutionary genomics.
BIOL 512. Evolution and Ecology of Marine Mammals (3)
Two lectures and three hours of laboratory.
Prerequisites: Biology 352 and 354.
Ecology 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 phylectic 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. Strongly recommended: Completion of three to six upper division units in the major.
Biological of marine invertebrate larvae. Biodiversity, evolution of complex life cycles, larval culture techniques, physiological and ecological consequences of environmental variability during larval development. Designing and peer reviewing original research proposals related to larval ecology.

BIOL 516B. Marine Larval Ecology Research Part 2 (4)
Three lectures and three hours of laboratory.
Prerequisites: Biology 516A and consent of instructor.
Research experience investigating marine invertebrate larval ecology.

BIOL 517. Marine Ecology (4)
Two lectures and six hours of laboratory.
Prerequisite: Biology 354.
Ecological concepts as applied to pelagic and benthic marine organisms and their environment. Field and laboratory experience in oceanographic techniques, particularly the coastal environment.

BIOL 523. Herpetology (4)
Two lectures and six hours of laboratory.
Prerequisites: Biology 203, 203L, 204, 204L. Recommended: Biology 352.
Evolution, systematics, distribution, and ecology of amphibians and reptiles of the world.

BIOL 524. Ornithology (4)
Two lectures, six hours of laboratory or field excursions, and a field project.
Prerequisites: Biology 203, 203L, 204, 204L. Strongly recommended: Completion of three to six upper division units in the major.
Study and identification of birds, especially those of the Pacific Coast and the San Diego region.

BIOL 525. Mammalogy (4)
Two lectures and six hours of laboratory.
Prerequisites: Biology 203, 203L, 204, 204L. Strongly recommended: Completion of three to six upper division units in the major.
Evolution, systematics, distribution and ecology of mammals of the world.

BIOL 526. Terrestrial Arthropod Biology (4)
Two lectures and six hours of laboratory.
Prerequisites: Biology 203, 203L, 204, 204L. Strongly recommended: Biology 352 and completion of three to six upper division units in the major.
Structure, function, behavior, ecology, evolution, and relationships of major groups of terrestrial arthropods, including insects, arachnids, and myriapods. Identification and natural history of southern California diversity.

BIOL 527. Animal Behavior (3)
Prerequisites: Biology 203, 203L, 204, 204L, 215; Psychology 211 and 260 for psychology majors.
Biological bases of animal behavior with emphasis on ethological approach, including evolution and adaptive significance of behavior.

BIOL 527L. Animal Behavior Laboratory (1)
Three hours of laboratory.
Prerequisite: Credit or concurrent registration in Biology 527.
Animal behavior with emphasis on ethological approach to include evolution and adaptive significance of behavior, data collection and analysis, scientific writing and results.

BIOL 528. Microbial Ecology (3)
Two lectures and three hours of laboratory.
Prerequisites: Biology 203, 203L, 204, 204L. Recommended: Biology 350 and 354.
Principles of microbial community and ecosystem dynamics and assemblage structure. Fisheries biology concepts, including aspects of plant evolution, demography, ecophysiology and phylectic analysis.

BIOL 530. Plant Systematics (4)
Two lectures and six hours of laboratory, field trips.
Prerequisites: Biology 203, 203L, 204, 204L. Strongly recommended: Completion of three to six upper division units in the major.
Plant adaptation and response to living and non-living environment including aspects of plant evolution, demography, eco-physiology, community and ecosystem dynamics and soil-plant relationships. Terrestrial systems emphasized.

BIOL 531. Taxonomy of California Plants (4)
Two lectures and six hours of laboratory.
Prerequisites: Biology 203, 203L, 204, 204L. Fundamentals of plant taxonomy with emphasis on identification of plants native and naturalized to California. Plant collecting techniques. Field trips are required.

BIOL 535. Plant Ecology (4)
Three lectures and three hours of laboratory.
Prerequisites: Biology 203, 203L, 204, 204L. Strongly recommended: Biology 354.
Ecology of terrrestrial systems emphasized.

BIOL 534. Environmental Policy and Regulations (3)
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.
Biology

BIOL 542. Chemical Ecology (3)
Prerequisites: Biology 354 and Chemistry 201.
Ecology of chemical signals involved in organismal interactions in aquatic and terrestrial ecosystems. Focal organisms range from plankton to plants, to mammals. Chemical ecology studies and experiments.

BIOL 544. Terrestrial Ecosystems and Climate Change (3)
Prerequisite: Biology 354.
Controls on fluxes and stocks of nutrients within terrestrial ecosystems, ecosystem responses, feedbacks to climate change. Climate systems, water transport, production and decomposition, nutrient cycling, stable isotopes, spatial and temporal integration.

BIOL 546. Systematics and Biodiversity (3)
Two lectures and two hours of activity.
Prerequisite: Biology 352.
History, philosophy, and practical aspects of systematic biology, emphasizing pervasive role of phylogenetic data in evolutionary biology and other fields, phylogenetic structure of all life forms, and geographic patterns of diversity, endemity and imperilment.

BIOL 549. Microbial Genetics and Physiology (3)
Prerequisites: Biology 350 or 366.
Physiology of microbial growth, bacterial structure and function, genetics of bacteriophages and bacteria.

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

BIOL 555. Principles of Electron Microscopy (2)
Prerequisites: Biology 204, 204L and Physics 180B.
Principles of scanning and transmission electron microscopy including theoretical basis of sample preparation.

BIOL 556. Scanning Electron Microscopy Laboratory (2)
Six hours of laboratory.
Prerequisites: Biology 204, 204L, and Physics 180B. Recommended: Biology 555.
Biological specimen preparation and operation of scanning electron microscope.

BIOL 557. Transmission Electron Microscopy Laboratory (3)
One lecture and six hours of laboratory.
Prerequisites: Biology 204, 204L, and Physics 180B. Recommended: Biology 555.
Biological sample preparation and operation of transmission electron microscope.

BIOL 560. Animal Physiology (3)
Prerequisites: Biology 203, 203L, 204, 204L; Chemistry 365; Physics 180B, 182A, and 182B.
Physiology of vertebrate and invertebrate animals with emphasis on diversity of solutions to physiological problems and on functional integration of organ systems.

BIOL 561. Radiation Biology (3)
Prerequisites: Biology 203, 203L, 204, 204L; Physics 180B, 182A, and 182B. Recommended: Biology 366.
Principles underlying radiological reactions of ionizing radiations. Effects of ionizing radiations at the biochemical, cell, organ, and organism levels.

BIOL 567. Advanced Biochemistry, Cellular, and Molecular Biology (4)
Prerequisites: Biology 366 and Chemistry 365.
Advanced concepts of cellular biology, molecular biology, and biochemistry.

BIOL 567L. Biochemistry, Cellular, and Molecular Biology Laboratory II (2)
Six hours of laboratory.
Prerequisites: Biology 366, 366L. credit or concurrent registration in Biology 567. Recommended: Biology 350.
Intermediate laboratory approaches to biochemistry, cellular biology, and molecular biology at a level appropriate for both advanced undergraduate and graduate students. (Formerly numbered Chemistry 467L.)

BIOL 568. Bioinformatics (3)
Prerequisites: Biology 566.
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 566. 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 589. Stem Cell and Regenerative Biology (3)
Prerequisites: Biology 366 and credit or concurrent registration in Biology 366L.
Stem cell basics, cloning, tissue engineering, research on animal models of regeneration, political and ethical issues surrounding stem cell debate.

BIOL 590. Physiology of Human Systems (4)
Three lectures and one hour of discussion.
Prerequisites: Biology 366, Chemistry 365, Physics 180B, 182B; or for the bioengineering emphasis: Physics 195, 196, 197.
Human physiology presented at both cellular and organ system levels; neurophysiology, muscle physiology, cardiovascular physiology and respiration, kidney function, hormone function and reproduction. For students majoring in a natural science or pre-professional studies.

BIOL 594. Biotechnology Research Rounds (2) Cr/NC
Prerequisites: Biology 366 and credit or concurrent registration in Biology 567.
Research methods in biotechnology community. Speakers from local biotechnology companies and research institutes discuss power and limitations of current research methods being applied to develop new therapeutics. Evaluation of approaches, results, and utility of these technologies. Not applicable to biology or microbiology majors.
BIOL 596. Special Topics in Biology (1-4)  
Prerequisite: Consent of instructor.  
Advanced selected topics in modern biology. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

BIOL 597A. Univariate Statistical Methods in Biology (3)  
Two lectures and three hours of laboratory.  
Prerequisite: Biology 352 or 354 or 366.  
Application of univariate statistical techniques in biological sciences.

**GRADUATE COURSES**

BIOL 600. Seminar (2-3)  
Prerequisite: Consent of instructor.  
An intensive study in advanced biology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

BIOL 606. Biological Data (3)  
Two lectures and three hours of laboratory.  
Prerequisite: Biology 597A or equivalent graduate course in biostatistics.  
Concepts and applications of advanced statistical techniques in the biological sciences to include multivariate statistics, analysis of discrete data, spatial statistics, time series analysis, and Monte Carlo methods (e.g. bootstrapping and randomization tests).

BIOL 624. Population Genetics (3)  
Two lectures and two hours of activity.  
Prerequisite: Biology 352.  
Theoretical and applied population genetics to include genetic diversity in natural populations, random drift, mutation, gene flow, natural selection, nucleotide variation, and quantitative genetics. Emphasis on data analysis and interpretation.

BIOL 645. Theory and Principles of Ecology I (3)  
Prerequisites: Admission to graduate program in biology and approval of ecology graduate adviser.  
Major theoretical concepts in ecology, topics of current interest, and historical context of central ideas in ecology, with emphasis on use of primary literature.

BIOL 677. Seminar in Marine Conservation Biology (3)  
Prerequisite: Graduate standing.  
Threats to marine biodiversity and marine populations.

BIOL 688. Seminar in Terrestrial Ecology (2)  
Prerequisite: Biology 354.  
Ecological concepts as applied to the terrestrial environment. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units applicable to a master’s degree.

BIOL 696. Advanced Topics in Biology (1-3)  
Prerequisite: Consent of instructor.  
Intensive study in specific areas of biology. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

BIOL 735. Seminar in Biogeography (2)  
Prerequisite: Biology 354.  
Concepts and principles of distributional history of plant and animal groups, and origins and dispersal of modern faunas and florae.

BIOL 740. Phylogenetic Systematics (3)  
Two lectures and three hours of laboratory.  
Prerequisite: Biology 354.  
Theory and methodology of phylogenetic systematics. Includes use of computer algorithms, survey of literature and preparation of a project in phylogenetic systematics. Not open to students with credit in Biology 740 (Seminar in Phylogenetic Systematics).

BIOL 745. Theory and Principles of Ecology II (3)  
Prerequisites: Admission to graduate program in biology and Biology 645.  
Community and ecosystem ecology to include foodwebs, landscapes, ecosystems, biogeochemistry. Conservation and applied ecology to include climate change, anthropogenic impacts on natural systems.

BIOL 766. Advanced Topics in Population and Community Ecology (2-4)  
Prerequisites: Biology 354 and consent of instructor.  
Selected topics in population and community ecology. May be repeated with new content and consent of the graduate adviser in ecology. Maximum credit six units applicable to a master’s degree.

BIOL 770. Seminar in Systematics and Evolution (2-3)  
Prerequisite: Consent of instructor.  
Selected topics in systematics and evolution. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units applicable to a master’s degree.

BIOL 795. Seminar in Ecology and Evolutionary Biology (1) Cr/NC  
Prerequisite: Graduate standing.  
Recent research advances in ecology and evolutionary biology. May be repeated with new content. Maximum credit six units applicable to a graduate degree.

BIOL 797. Research (1-3) Cr/NC/RP  
Prerequisites: An officially appointed thesis 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.  
Thesis or project in phylogenetic systematics. Not open to students with credit in Biology 740 (Seminar in Phylogenetic Systematics).

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. Bizzozzo, Ph.D., Professor of Biology
Terrence G. Frey, Ph.D., Professor of Biology
Christopher C. Glombotski, Ph.D., Professor of Biology
Roberta A. Gottlieb, M.D., Professor of Biology
Stanley R. Maloy, Ph.D., Professor of Biology and Dean of the College of Sciences
Sheilli R. McAlpine, Ph.D., Professor of Chemistry and Biochemistry
Kathleen L. McGuire, Ph.D., Professor of Biology
Jacques Perrault, Ph.D., Professor of Biology
Forest Rohwer, Ph.D., Professor of Biology
Anca Mara Segall, Ph.D., Professor of Biology
William E. Stumph, Ph.D., Professor of Chemistry and Biochemistry
Mark A. Sussman, Ph.D., Distinguished Professor of Biology
Constantine Tsoukas, Ph.D., Professor of Biology (Graduate Adviser)
Scott T. Kelley, Ph.D., Associate Professor of Biology
John J. Love, Ph.D., Associate Professor of Chemistry and Biochemistry
P.J.E. (Jenny) Quintana, Ph.D., Associate Professor of Public Health
Peter van der Geer, Ph.D., Associate Professor of Chemistry and Biochemistry
Elizabeth R. Waters, Ph.D., Associate Professor of Biology
Robert W. Zeller, Ph.D., Associate Professor of Biology
Kelly Doran, Ph.D., Assistant Professor of Biology
Ralph Feuer, Ph.D., Assistant Professor of Biology
Tom Huxford, Ph.D., Assistant Professor of Chemistry and Biochemistry
Roland Wolkowicz, Ph.D., Assistant Professor of Biology
Ricardo Zayas, Ph.D., Assistant Professor of Biology

Adjunct Faculty
Ashley J. Birkett, Ph.D., Apovia Incorporated
Ricardo Zayas, Ph.D., Assistant Professor of Biology

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 610 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.

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 assistantships in biology and chemistry are available to qualified students. Application blanks and additional information may be obtained from the graduate coordinator of biology and are also available at http://www.bio.sdsu.edu.

Admission to Graduate Study
Candidates for admission may come from a variety of disciplines in the biological and physical sciences. Ultimately, the research programs of individuals wishing to pursue master’s degree work in molecular biology will be carried out under the supervision of MBI members.

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

1. Possess a bachelor’s degree with a major in a biological or physical science equivalent to that offered at San Diego State University.
2. Have a grade point average of 2.85 or better in work taken for the baccalaureate degree.
4. Supply two letters of reference that describe the applicant’s potential for graduate work.

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

Adancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy, including the foreign language requirement for the master of arts degree, as stated in Part Four of this bulletin. Satisfactory progress on the thesis research will be prerequisite to obtaining departmental approval for advancement.

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Courses Acceptable for the Concentration in Molecular Biology (M BIO)

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

### UPPER DIVISION COURSES

#### Biology (BIOL)
- BIOL 510. Molecular Evolution (3)
- BIOL 549. Microbial Genetics and Physiology (3)
- BIOL 554. Molecular Virology (3)
- BIOL 555. Principles of Electron Microscopy (2)
- BIOL 556. Scanning Electron Microscopy Laboratory (2)
- BIOL 557. Transmission Electron Microscopy Laboratory (3)
- BIOL 567. Advanced Biochemistry, Cellular, and Molecular Biology (4)
- BIOL 568. Bioinformatics (3)
- BIOL 570. Neurobiology (3)
- BIOL 575. Molecular Basis of Heart Disease (3)
- BIOL 576. Developmental Biology (3)
- BIOL 584. Medical Microbiology (3)
- BIOL 585. Cellular and Molecular Immunology (3)
- BIOL 590. Physiology of Human Systems (4)
- BIOL 594. Biotechnology Research Rounds (2) Cr/NC
- BIOL 596. Special Topics in Biology (1-4)
- BIOL 597A. Univariate Statistical Methods in Biology (3)

#### Chemistry (CHEM)
- CHEM 510. Advanced Physical Chemistry (3)
- CHEM 550. Instrumental Methods of Chemical Analysis (2)
- CHEM 560. General Biochemistry (3)
- CHEM 562. Intermediary Metabolism (2)
- CHEM 563. Nucleic Acid Function and Protein Synthesis (2)
- CHEM 564. Receptor Biochemistry and Protein Modification (2)
- CHEM 567. Biochemistry Laboratory (3)
- CHEM 596. Advanced Special Topics in Chemistry (1-3)

<table>
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<tr>
<th>CR/NC/RP</th>
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### 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. 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.cb bd.sdsu.edu/

Graduate Adviser: Catherine J. Atkins, Ph.D.

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

* E. Dale Sevier, Ph.D., Director of the Center for Bio/Pharmaceutical and Biodevice Development

* Serves on the Faculty Governing Board which makes recommendations on admissions and curriculum.

General Information

The Center for Bio/Pharmaceutical and Biodevice Development offers an interdisciplinary advanced degree program that focuses on training students in areas related to development, manufacturing, production, processing, and marketing of biotechnological, biopharmaceutical, pharmaceutical, in vitro diagnostic, and medical device products. The center integrates faculty and programs from various departments. The center addresses research and workforce needs of companies as they make the transition from research and development to manufacturing and production, including the legal, ethical, and regulatory elements that both guide and restrict the industry.

Master of Science Degree in Biomedical Quality Systems

(Offered through the College of Extended Studies)

No new students are being admitted to the Master of Science program. For further information, contact Dr. Catherine J. Atkins, Graduate Adviser and Associate Dean in the College of Sciences. Applications are being accepted for the Advanced Certificate in Biomedical Quality Systems.

The coursework in this curriculum is offered only in special sessions. Students enroll through the College of Extended Studies and are subject to a fee structure that is different from that for regularly matriculated students. For more information, contact the director of the program or call the College of Extended Studies.

This degree program provides a comprehensive background in quality systems principles and practices for the development, testing, and manufacture of pharmaceutical, biopharmaceutical, and medical device products with the additional training necessary for compliance with regulatory requirements. The degree is offered through the College of Sciences.

The degree offering focuses on principles of quality control and quality assurance that support compliance with the laws and regulations imposed by the Federal government, especially the Food and Drug Administration, related to drug discovery, development, testing, and manufacture of products for commercial distribution. The degree program will provide students with detailed knowledge and understanding of current practices and regulations and their practical application to the development and commercialization of drug, biologics, and medical device products. Also incorporated into the degree program are business courses that provide students with communication and management skills essential for the successful quality assurance and quality control professional in an industry work environment.

Admission to Graduate Study

All students must satisfy the general admission and examination requirements for admission to the university with classified graduate standing, as described in Part Two of the Graduate Bulletin.

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

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

Graduate Admissions

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

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

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

Note:

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

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

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

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

Center for Bio/Pharmaceutical and Biodevice Development

The following materials should be mailed or delivered to:

Master of Science in Biomedical Quality Systems
Director of Biomedical Quality Systems Programs, 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)
   - RA 778 Quality Control and Quality Assurance: Pharmaceuticals, Biologics, and Medical Devices (3)
   - BA 651 Organizational Behavior (3)
   - BA 662 Operations and Supply Chain Management (3)
   - MIS 705 Communication Strategies (3)

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

   Elective Courses
   - BQS 696 Advanced Topics in Biomedical Quality Systems (1-4)
   - BQS 740 Statistical Process Control (3)
   - BQS 741 Statistical Experiment Design (3)
   - BQS 797 Research (1-3) Cr/NC/RP
   - BQS 798 Special Study (1-3) Cr/NC/RP
   - RA 601 Pharmaceutical, Biotechnology, and Medical Device Industries (3)
   - RA 770 Current Good Manufacturing Practices – General Concepts (3)
   - RA 771 Current Good Manufacturing Practices – Advanced Topics (3)
   - RA 773 Medical Device Regulations (3)
   - RA 774 Investigational and Marketing Applications for Drugs, Biologics, and Medical Devices (3)
   - RA 775 Clinical Trials: Issues in Design, Conduct, and Evaluation (3)
   - RA 776 Validation Aspects of Drugs, Biologics, and Device Product Development and Manufacturing, Including Computer Related Systems and Software (3)

Advanced Certificate in Biomedical Quality Systems

(Offered through the College of Extended Studies)

The Advanced Certificate in Biomedical Quality Systems involves the completion of Biomedical Quality Systems 601, 603, 730, and 745. Biomedical Quality Systems 601 covers the philosophies, organization, and active role of the international regulatory agencies. Biomedical Quality Systems 603 is designed to present the major elements and principles of the international quality systems used in the development and commercialization of biomedical products. In Biomedical Quality Systems 730, students learn the major elements and principles of the international regulations governing the development and commercialization of biomedical products. Biomedical Quality Systems 745 will ensure that students build a foundational and practical knowledge in quality systems and biomedical regulations related to major elements and principles of international regulations governing control of data, documents, information, and records associated with biomedical products.

The program adviser is Dr. Catherine J. Atkins, Graduate Adviser and Associate Dean in the College of Sciences. For more information see http://interwork.sdsu.edu/cbbd/. To enroll in this certificate program, call 619-594-5152.
Courses Acceptable on Master’s Degree Program in Biomedical Quality Systems (BQS)

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

GRADUATE COURSES

BQS 601. Biomedical Quality Systems (3)
Global view of biomedical industry and safe medical devices act from quality perspective to provide foundation in field of biomedical quality systems.

BQS 603. Foundational Quality Systems (3)
Prerequisite: Biomedical Quality Systems 601.
Roles and responsibilities of a typical quality assurance (QA) department in biopharmaceutical, medical device, and pharmaceutical industries. Practical skills, approaches, and solutions to multifaceted auditing, change control, compliance, documentation, laboratory, material, and production control issues.

BQS 621. Quality Audits: Internal, Vendors, and Contract Services (3)
Prerequisite: Biomedical Quality Systems 601.
Audit topics explored from viewpoint of industry professional, current industry, and regulatory information.

BQS 696. Advanced Topics in Biomedical Quality Systems (1-4)
Prerequisite: Consent of instructor.
Current issues and topics in quality systems evaluated and discussed. Recent developments and changes in selected areas of quality systems presented by faculty and industry professionals. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

BQS 730. Good Manufacturing, Laboratory, and Clinical Practices (3)
Prerequisite: Biomedical Quality Systems 601.
Roles and responsibilities of a Quality Assurance (QA) function in the biopharmaceutical, medical device, and pharmaceutical industries. Equip middle and upper level biomedical professionals with “real world” skills, approaches, and solutions to multifaceted quality issues.

BQS 740. Statistical Process Control (3)
Prerequisites: Biomedical Quality Systems 601 and basic statistics.
Statistical methods for quality control and improvement, focusing on control charts, measurement systems analysis, process improvement, and process capability assessment.

BQS 741. Statistical Experiment Design (3)
Prerequisite: Biomedical Quality Systems 601.
Effective experimental strategy, factorial and fractional factorial designs, experiments with random factors, nested effects, categorical factors, and split plots. Use of computer software for design construction and analysis.

BQS 745. Document Control Quality System (3)
Prerequisite: Biomedical Quality Systems 601.
Regulatory requirements for developing and manufacturing documentation, supporting the quality assurance function.

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

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

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

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

In the College of Sciences and the College of Health and Human Services

Faculty Committee for Biostatistics and Biometry
Douglas H. Deutschman, Ph.D., Professor of Biology
Juanjuan Fan, Ph.D., Professor of Statistics
Richard A. Levine, Ph.D., Professor of Statistics
Kung-Jong Lui, Ph.D., Professor of Statistics
John E. Alcaraz, Ph.D., Associate Professor of Public Health
Ming Ji, Ph.D., Associate Professor of Public Health
Chii-Dean Lin, Ph.D., Associate Professor of Statistics
Hector Lemus, Dr.P.H., Assistant Professor of Public Health

General Information
San Diego State University provides preparation for biostatistically oriented careers by offering biostatistics related coursework, research opportunities and biostatistical consulting experience within regular degree programs in the Departments of Biology, Mathematics and Statistics, and the Graduate School of Public Health. A Master of Science degree in statistics with concentration in biostatistics may be earned in the Department of Mathematics and Statistics; and a Master of Public Health degree with concentration in biometry may be earned in the Graduate School of Public Health. Degrees in general biostatistics or biometry are not offered by the university. However, a Master of Science degree in biostatistics or biometry may be earned in Interdisciplinary Studies (see the appropriate section in this bulletin).

Specific courses in biostatistics and biometry (listed below) are offered with the cooperation of faculty from the participating departments. Biostatistics and biometry courses that specialize in applications to biology are offered in the Department of Biology; similarly, courses that specialize in applications to public health are offered in the Graduate School of Public Health. Courses that cover a variety of areas of application (including biology and public health) are offered by the Department of Mathematics and Statistics. In addition to these applied courses, the Department of Mathematics and Statistics offers some courses in statistics and biostatistics that are more mathematically oriented.

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

Biology Course (BIOL)
(Adviser: Deutschman, 619-594-5391)
BIOL 597A. Univariate Statistical Methods in Biology (3)

Public Health Courses (P H)
(Adviser: Slymen, 619-594-6439)
P H 602. Biostatistics (3)
P H 627. Advanced Statistical Methods in Public Health (3)
P H 628. Applications of Multivariate Statistics in Public Health (3)
P H 722. Seminar in Clinical Trials (3)

Statistics Courses (STAT)
(Adviser: Lui, 619-594-7239)
STAT 510. Applied Regression Analysis (3)
STAT 520. Applied Multivariate Analysis (3)
STAT 550. Applied Probability (3)
STAT 551A. Probability and Mathematical Statistics (3)
STAT 551B. Probability and Mathematical Statistics (3)
STAT 560. Sample Surveys (3)
STAT 570. Stochastic Processes (3)
STAT 670A-670B. Advanced Mathematical Statistics (3-3)
STAT 672. Nonparametric Statistics (3)
STAT 676. Bayesian Statistics (3)
STAT 677. Design of Experiments (3)
STAT 678. Survival Analysis (3)
STAT 679. Analysis of Discrete Data (3)
STAT 680A-680B. Advanced Biostatistical Methods (3-3)
Admission to the college’s graduate programs is competitive. A number of factors are taken into consideration in the admission decision, and only the top applicants are accepted. These factors include the applicant’s previous academic performance, the quality of the previous universities attended, the field of undergraduate study, scores on the Graduate Management Admissions Test (GMAT), management experience and the written application essay. References which validate experience may also be considered. A 570 English language score is normally required when English is not the student’s principal language.

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

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

Graduate Admissions

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

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

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

(2) GMAT scores (http://www.mba.com, SDSU institution code 9L7-2P-73);

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

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

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

The following materials should be mailed or delivered to:

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

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

Master of Business Administration Degree for Executives

The following materials should be mailed or delivered to:

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

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

Complete directions are included in the MBA for Executives program application packet. Call 619-594-6010 or http://www.sdsu.edu/mba.
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 minimum 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)
     - MGT 722 Seminar in Business Ethics and Social Institutions (3)
     - MGT 746 Seminar in Corporate Governance (3)
     - MIS 755 Information Systems Security Management (3)
   - Management of Technology Issues in Business Theme
     - MIS 688 Information Systems in Organizations (3)
     - MIS 691 Decision Support Systems (3)

3. Complete 18 units of electives if one or more core courses are required; 21 units of electives if all seven core course requirements are waived. Not more than 12 units outside the College of Business Administration and not more than a total of six units in courses 780 (Field Studies in Business), 797 (Research), and 798 (Special Study), will be accepted toward the degree. Courses taken outside the College of Business Administration should be related to the MBA program and must be approved by the director of graduate programs.

4. Among themes and electives listed above, a student must complete courses from three-out-of-the-five departments in the College of Business Administration, except for a student pursuing a specialization in Athletics and Fitness Management or Health Services Administration, who must complete courses from two-out-of-the-five departments in the College of Business Administration.

5. Complete a culminating experience course. (3 units)
   - B A 795  Integrative Business Analysis (3)
   - B A 799A  Thesis (3) Cr/NC/RP

A student may choose to specialize by completing 12 units of non-core courses from one of the following specializations:

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<thead>
<tr>
<th>Specializations</th>
<th>Major Code</th>
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<tr>
<td>Accountancy</td>
<td>05021</td>
<td>221908</td>
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<tr>
<td>Athletics &amp; Fitness Management</td>
<td>05011</td>
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<td>Entrepreneurship</td>
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<tr>
<td>Supply Chain Management</td>
<td>05064</td>
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</tr>
</tbody>
</table>

Sports Business Management (Offered only through the College of Extended Studies) (Major Code: 05011) (SIMS Code: 221715):

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

Full and Half-Time Programs

Students enrolling in the M.B.A. program may be either full- or half-time students. Generally, in their first year, full-time students must take four courses at a time and half-time students must take two courses at a time. Students will be assigned to classes during their first year if they are full-time students and during the first two years if they are half-time students.

Master of Business Administration for Executives

(Offered only through the College of Extended Studies)

Admission to the Degree Curriculum

In addition to meeting the criteria for admission to the university, as well as those listed under “Admission to the Graduate Program in the College of Business Administration,” applicants must also demonstrate that they have had significant experience in management-level positions in business, government, or not-for-profit organizations.

Specific Requirements for the M.B.A. Degree for Executives

(Major Code: 05011)

The Master of Business Administration for Executives is operated by the Executive and Specialized Programs Office in the College of Business Administration, and is an alternative path for the Master of Business Administration degree. The program is designed especially to meet the needs of mid-career executives. Students in the program have an average of 15 years of full-time professional work experience and eight years of managerial or equivalent experience, and bring a wealth of practical knowledge to the classroom discussion.

Students accepted for the M.B.A. for Executives concentration are working executives.

All courses are scheduled in a modular fashion on alternate Fridays and Saturdays over a 24-month period for the convenience of working executives.
The fee structure is also unique to the program and unrelated to the usual San Diego State University fee schedule. Students should contact the program office for a program calendar, class schedule, and fee summary.

In addition to meeting the requirements for classified graduate standing, and the basic requirements for the master’s degree as described in Part Four of this bulletin, students must complete an approved program of study containing 48 units of 600- and 700-numbered courses. These courses will be offered in a predetermined pattern. No transfer courses and no substitute courses are accepted.

The official programs of all students in any one cycle are identical. Advancement to candidacy requires completion of at least 24 units of coursework listed on the official program of study with a minimum grade point average of 3.0 (B).

**MBA for Executives**

(Major Code: 05011) (SIMS Code: 221705)

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

**Master of Science Degree in Business Administration**

(Major Code: 05011) (SIMS Code: 221701)

**Admission to the Degree Curriculum**

In addition to meeting the requirements for classified graduate standing in the university and admission to the College of Business Administration, as described above, and in Part Two of this bulletin, the student must have satisfactorily completed equivalents of the following courses:

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

In addition, the student’s adviser may request satisfactory completion of additional prerequisite courses in the student’s proposed field of specialization. Current students are required to complete any needed program prerequisites by enrolling in graduate courses and may not satisfy prerequisites by enrolling in undergraduate equivalency courses.

Notice of admission to a curriculum with classified graduate standing will be sent to the student upon the recommendation of the College of Business Administration and the approval of the dean of the Division of Graduate Affairs.

For admission to the taxation concentration (05022) the student must be a certified public accountant (CPA) or have a juris doctor (JD) degree from an accredited law school and have completed Accountancy 201 and 202.

**Advancement to Candidacy**

All students must satisfy the general requirements for advancement to candidacy, as described in Part Four of this bulletin. Students concurrently enrolled in deficiency coursework may be given permission to take the comprehensive examination in their concentration prior to actual completion of all coursework. However, comprehensive examinations will not be evaluated and results will not be reported to the Division of Graduate Affairs until all deficiency coursework has been successfully completed. This may delay graduation.

**Specific Requirements for the Master of Science Degree**

In addition to meeting the requirements for classified graduate standing as described above and the general requirements for master’s degrees as described in Part Four of this bulletin, the student must complete a graduate program of at least 30 approved units to include at least 21 units in 600- and 700-numbered courses (except for the concentration in Financial and Tax Planning which requires at least 18 units in 600- and 700-numbered courses). Up to nine units of coursework may be accepted as transfer credit. This program cannot include Finance 604; Management Information Systems 609; and Business Administration courses numbered 650-665, without specific permission of the director, Graduate Business Programs. At least 24 units must be in business administration and economics. Not more than a total of six units in courses 797 (Special Study), SIMS (Special Study), and Business Administration 780 (Field Studies in Business), may be accepted for credit toward the degree.

Each of the concentrations in the Master of Science in Business Administration requires Plan A, Thesis; or Plan B, Directed Readings in Business Administration or a written comprehensive examination offered by the appropriate department. The program must be approved by the college and departmental adviser.

For regulations concerning grade point averages, final approval for the granting of the degree, award of the degree, and diplomas, see the section entitled “Requirements for the Master’s Degree,” in Part Four of this Bulletin.

**Concentrations**

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Major Code</th>
<th>SIMS Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurship</td>
<td>05097</td>
<td>22360</td>
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<tr>
<td>Finance</td>
<td>05041</td>
<td>222115</td>
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<td><em>Financial and Tax Planning</em></td>
<td>05043</td>
<td>222124</td>
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<tr>
<td>Information Systems</td>
<td>07021</td>
<td>223336</td>
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<td>International Business</td>
<td>05131</td>
<td>233650</td>
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<td>Management</td>
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<td><em>Real Estate</em></td>
<td>05111</td>
<td>222192</td>
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<tr>
<td>Supply Chain Management</td>
<td>05064</td>
<td>222382</td>
</tr>
<tr>
<td>Taxation</td>
<td>05022</td>
<td>221929</td>
</tr>
</tbody>
</table>

**Special Provision for Specific Concentrations**

*Financial and Tax Planning*. For this concentration an optional Plan B, Comprehensive Examination, is available. Here students may substitute a comprehensive examination and three units of additional coursework for the thesis requirement. This examination will be administered while students are registered in Finance 590.

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

- ACCTG 201 Financial Accounting Fundamentals (3)
- ECON 101 Principles of Economics (3)
- ECON 102 Principles of Economics (3)
- ECON 201 Statistical Methods (3) 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 for Business (3)
FIN 323 Fundamentals of Finance (3)
MKTG 370 Marketing (3)
MATH 120 Calculus for Business Analysis (3)**

Master of Business Administration Degree
and Juris Doctor Degree
(California Western School of Law)

(Major Code: 05995) (SIMS Code: 221720)

**General Information**

The College of Business Administration and the California Western School of Law offer a four-year concurrent program and study leading to a Master of Business Administration and Juris Doctor degree in law. The objective of the concurrent degrees program is to prepare students who are competent in both law and business administration for advanced practice in many areas where the fields converge. Both degrees must be awarded in the same semester.

**Admission to the Degree Curriculum**

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

The concurrent degree program requires separate application to each institution and admission to each institution. Admission decisions are made independently by San Diego State University and California Western School of Law; admission to one institution does not imply admission to the other.

The coordinators for the concurrent degree program in business administration and law are the director of graduate business programs, San Diego State University, and the associate dean, California Western School of Law.

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

**College of Business Administration**

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

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

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

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

   The requirement to complete individual core courses may be waived by the director of graduate business programs if an equivalent course has been completed. Equivalency is determined by course content, institution at which course was taken, grade received, and time since course was taken. Current students are required to enroll in graduate courses and may not satisfy core course requirements by enrolling in undergraduate equivalency courses.

2. Management of Technology Theme (3 units)

   **MIS 688 Information Systems in Organizations (3)
   MIS 691 Decision Support Systems (3)**

3. B A 780 Field Studies in Business (3)

4. Complete six units of electives if two or more core courses are required; nine units of electives if one core course is required; 12 units of electives if no core courses are required.

5. B A 795 Integrative Business Analysis (3)

**California Western School of Law**

(77 Units)

Civil Procedures I and II (6)
Constitutional Law I (3)
Contracts I and II (6)
Criminal Law (3)
Criminal Procedure I (3)
Evidence (4)
Legal Process (0)
Legal Skills I, II, III (6)
Professional Responsibility (2)
Property I and II (6)
Torts I and II (6)
Internship (5)
Electives: 27 units

The specific sequence of courses over the four year period is listed in the admissions material. Students attend the schools in the following pattern:

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>California Western School of Law only</td>
<td>San Diego State University College of Business Administration only</td>
<td>Both schools</td>
<td>Both schools</td>
</tr>
</tbody>
</table>

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

(Thomas Jefferson School of Law)

(Major Code: 05995) (SIMS Code: 221721)

**General Information**

The College of Business Administration and the Thomas Jefferson School of Law offer a four-year concurrent program and study leading to a Master of Business Administration and Juris Doctor degree in law. The objective of the concurrent degrees program is to prepare students who are competent in both law and business administration for advanced practice in many areas where the fields converge. Both degrees must be awarded in the same semester.

**Admission to the Degree Curriculum**

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

The concurrent degree program requires separate application to each institution and admission to each institution. Admission decisions are made independently by San Diego State University and Thomas Jefferson School of Law; admission to one institution does not imply admission to the other.

The coordinators for the concurrent degree program in business administration and law are the director of graduate business programs, San Diego State University, and the associate dean, Thomas Jefferson School of Law.
Specific Requirements for the MBA/JD Concurrent Degree

College of Business Administration

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

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

1. Complete the following core of seven courses. (21 units)
   - B A 650 Financial Reporting and Analysis I (3)
   - B A 651 Organizational Behavior (3)
   - B A 652 Statistical Analysis (3)
   - B A 653 Managerial Economics (3)
   - B A 655 Marketing (3)
   - B A 662 Operations and Supply Chain Management (3)
   - B A 665 Financial Management I (3)

   The requirement to complete individual core courses may be waived by the director of graduate business programs if an equivalent course has been completed. Equivalency is determined by course content, institution at which course was taken, grade received, and time since course was taken.

2. Management of Technology Issues in Business Theme (3 units)
   - MIS 688 Information Systems in Organizations (3)
   - MIS 691 Decision Support Systems (3)

3. B A 780 Field Studies in Business (1-3) (Cr/NC)

4. Complete six units of electives if two or more core courses are required; nine units of electives if one core course is required; 12 units of electives if no core courses are required.

5. B A 795 Integrative Business Analysis (3)

Thomas Jefferson School of Law

(76 Units)

- Business Associations (4)
- Civil Procedure I and II (6)
- Constitutional Law I and II (6)
- Contracts I and II (6)
- Criminal Law (3)
- Criminal Procedure (3)
- Evidence (4)
- Legal Writing I and II (7)
- Professional Responsibility (3)
- Property I and II (6)
- Remedies (3)
- Torts I and II (6)
- Internship (5)
- Electives: 14 units

The specific sequence of courses over the four year period is listed in the admissions material. Students attend the schools in the following pattern:

Year 1  Thomas Jefferson School of Law 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 studying leading to a Master of Business Administration and a Master of Arts in Latin American Studies. The primary objective of the concurrent program is to offer preparation in the fields of business administration and Latin American studies for the purpose of providing the knowledge and skills necessary to promote and engage in business relationships within a Latin American historical, cultural, and linguistic milieu, in Latin America or in the United States.

For information, contact the chair of the Latin American Studies Committee or the director of graduate programs in the College of Business Administration.

Admission to the Degree Curriculum

Since this program combines disparate disciplines, applicants are required to submit GMAT scores and should have substantial academic backgrounds in the humanities and social sciences. Applicants should also have a background in Spanish or Portuguese language and literature. Students in the concurrent degree program are expected to be full time so that all requirements will be satisfied in an acceptable time.

Specific Requirements for the MBA/MA Degree

(Major Code: 49061) (SIMS Code: 992001)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the student must complete an officially approved course of study consisting of 54-72 units as outlined below.

1. The college expects students entering the Master of Business Administration/MA in Latin American Studies program to be proficient in several areas. These include proficiency in statistics, mathematical skills, basic economics and in the use of personal computers, including spreadsheets and word processing. The students are responsible for insuring that they possess these skills before beginning the program.

2. Complete the following core of seven courses (21 units):
   - B A 650 Financial Reporting and Analysis I (3)
   - B A 651 Organizational Behavior (3)
   - B A 652 Statistical Analysis (3)
   - B A 653 Managerial Economics (3)
   - B A 655 Marketing (3)
   - B A 662 Operations and Supply Chain Management (3)
   - B A 665 Financial Management I (3)

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

3. Complete one course from each of the below listed themes (6 units):
   - Corporate Responsibility: Legal, Ethical, and Social Issues in Business Theme
   - Management of Technology Issues in Business Theme

4. Complete 15 units in Business Administration to include:
   - FIN 604 Legal Environment for Executives (3)
   - MGT 722 Seminar in Business Ethics and Social Institutions (3)
   - MGT 746 Seminar in Corporate Governance (3)
   - MIS 755 Information Systems Security Management (3)
   - MGT 731 Seminar in Strategic Management of Technology and Innovation (3)

5. Complete 18 units of Latin American content, including the following required courses:
   - LATAM 600 Seminar in Latin American Studies (3)
   - LATAM 601 Seminar on Methodology of Latin American Studies (3)
The remaining 18 units selected from the following list of courses:

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

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

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

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

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

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

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

6. In addition, the student must complete MGT 797 (Research) and B A 799A (Thesis). The thesis in Business Administration will treat a Latin American related topic and will be supervised by a business faculty with international business expertise and at least one faculty member from the Latin American studies program.

If a student after entering the concurrent MBA/MA program returns to a single degree program, all the requirements for the single degree program must be met.

**Advancement to Candidacy**
All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin. In addition, 1) the student will be required to complete Spanish 302 (or its equivalent), or Portuguese 401 (or its equivalent), and pass an oral and written examination administered by the Department of Spanish and Portuguese Languages and Literatures; 2) all core courses in business and Latin American studies must be completed prior to advancement with a minimum grade point average of 3.0 and no grade less than a C in any core course; 3) have been recommended for advancement by the combined advisory committee; 4) have a thesis proposal approved by the combined faculty advisory committee.

Upon advancement to candidacy, the student will enroll in Management 797 (Research) and B A 799A (Thesis). A thesis (Plan A) incorporating theory, method, and analytic techniques from both disciplines is the culminating experience for the concurrent program leading to the MBA and MA degrees.

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

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

**Courses Acceptable on the Master of Business Administration and the Master of Science Degree Programs (B A)**

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

**GRADUATE COURSES**

**B A 650. Financial Reporting and Analysis I (3)**
Prerequisite: Classified graduate standing.
Understanding of accounting procedures and judgments underlying corporate financial statements; ability to read and analyze these statements; make inferences from them about financial health, likelihood of success, and other important attributes of various business entities.

**B A 651. Organizational Behavior (3)**
Prerequisite: Classified graduate standing.
Study of individuals and groups within an organizational context. Topics include leadership, individual differences, organizational design, group processes and characteristics, organizational processes and practices; and influence of these on individual, group, and organizational effectiveness.

**B A 652. Statistical Analysis (3)**
Prerequisites: Classified graduate standing and basic statistics.
Understanding and applications of statistics for problem solving and managerial decision making.

**B A 653. Managerial Economics (3)**
Prerequisite: Classified graduate standing.
Microeconomic theory applied to business decision making; optimal resource allocation, market structure and pricing from a business viewpoint. Economics of information.

**B A 655. Marketing (3)**
Prerequisite: Classified graduate standing.
Role and function of marketing in the organization and society. Planning, implementation, and evaluation of marketing strategies and programs. Not open to students with credit in Marketing 370.

**B A 660. Managerial Accounting (3)**
Prerequisite: Classified graduate standing.
Understanding and applications of accounting as they relate to 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)**
Prerequisite: Business Administration 650 and 652.
Role of finance in firm, financial planning and control, management of working capital, time value of money, valuation, risk analysis, basic capital budgeting, long-term financing, international aspects of financial decisions.
B A 780. Field Studies in Business (1-3) Cr/NC
Prerequisite: Completion of MBA core.
Application of business concepts to real world organizations. Students work under supervision of a faculty member to perform a project utilizing theories and principles from previous business coursework. Maximum credit six units.

B A 795. Integrative Business Analysis (3)
Prerequisites: Advancement to candidacy and completion of MBA core.
Strategic case analysis of business problems and preparation for comprehensive examination for students in M.B.A. program under Plan B. Problem definition analysis and prioritization of solution mechanisms.

B A 799A. Thesis (3) Cr/NC/RP
Prerequisite: 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 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.

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

Courses Acceptable on the Master of Business Administration Degree for Executives (B A)

Graduate Courses

B A 601. Organizational Behavior for Executives (3)
(Offered only in Extension)
Role of the manager in designing organizations for effectiveness with emphasis on organizational theory and organizational behavior.

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

B A 603. Executive Financial Accounting (2)
(Offered only in Extension)
Prerequisite: Admission to M.B.A. for Executives program.
Accounting procedures and judgments underlying corporate financial statements; ability to read and analyze these statements; make inferences about financial stability, likelihood of success, and other important attributes of various business entities.

B A 604. Executive Managerial Accounting (2)
(Offered only in Extension)
Prerequisite: Admission to M.B.A. for Executives program.
Accounting information for internal decision making purposes to include cost measurement, capacity management, activity based costing, activity based management, production costing, quality costing, pricing, CVP analysis, budgeting, performance evaluation, transfer pricing, and compensation.

B A 605. Managerial Marketing (2)
(Offered only in Extension)
The marketing function in an organization. Managerial activities of marketing including market analysis, target market selection and design of the organization's marketing program.

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

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

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

B A 701. Executive Entrepreneurship (3)
(Offered only in Extension)

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

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

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

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

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

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

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

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

OFFICE: Student Services 2411
TELEPHONE: 619-594-5070
FAX: 619-594-3675
E-MAIL: accounting@mail.sdsu.edu

Faculty
Sharon M. Lightner, Ph.D., Director of School
John C. Anderson, Ph.D., Professor of Accountancy
C. Janie Chang, Ph.D., Professor of Accountancy,
   The Vern E. Odmark Chair in Accountancy (Graduate Adviser)
Gary M. Grudnitski, Ph.D., Professor of Accountancy
Nathan A. Oestreich, Ph.D., Professor of Accountancy
Gerald E. Whittenburg, Ph.D., Professor of Accountancy
   (Graduate Adviser)
Damon M. Fleming, Ph.D., Associate Professor of Accountancy
   (Graduate Adviser)
Gun-Ho Joh, Ph.D., Associate Professor of Accountancy
   (Graduate Adviser)
Victoria Krivogorsky, Ph.D., Associate Professor of Accountancy
Leon C. Chan, Ph.D., Assistant Professor of Accountancy
Shana Clor-Proell, Ph.D., Assistant Professor of Accountancy
David DeBoskey, Ph.D., Assistant Professor of Accountancy
Steven L. Gill, Ph.D., Assistant Professor of Accountancy
Kevin W. Hee, Ph.D., Assistant Professor of Accountancy
Chad Proell, Ph.D., Assistant Professor of Accountancy

The Vern E. Odmark Chair in Accountancy
Established in recognition of Dr. Vern E. Odmark for his 25 years of teaching at SDSU, basic support is provided by contributions from friends, alumni, and corporations, including many major national accounting firms. The chair acknowledges the university’s objective of continuing the high standards of teaching excellence and professionalism that characterized Odmark’s career.

Dr. Chee W. Chow, widely recognized throughout the country for the breadth of his research and his technical thoroughness, held the chair from 1984 until his retirement in 2006. Dr. Janie Chang, recognized for research and teaching was awarded the chair in fall 2006.

Master of Science Degree in Accountancy

General Information
The objective of the Master of Science degree program in accountancy is to provide students with greater breadth and depth in accounting education than is possible in the baccalaureate degree. The program allows students to focus their accounting studies in an area of specialization within the field of accounting and to gain a greater breadth in their knowledge of business and accounting. In order to provide the opportunity for specializing one's accounting knowledge, the M.S. program provides three areas of specialization: accounting information systems, financial reporting, and taxation. Each area consists of a series of selected courses which students take upon the recommendation of their adviser. Specialization within the M.S. degree is intended to give students the necessary academic background and research experience to advance their careers in public accounting, private accounting or government. The M.S. degree may also prepare students for a teaching career or admittance into a doctoral program.

Admission to the Degree Curriculum
In addition to meeting the requirements for classified graduate standing in the university and admission to the College of Business Administration, as described above, and in Part Two of this bulletin, the student must have satisfactorily completed the following courses or their equivalent:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>B A 650</td>
<td>Financial Reporting and Analysis I (3)</td>
</tr>
<tr>
<td>B A 660</td>
<td>Managerial Accounting (3)</td>
</tr>
<tr>
<td>B A 651</td>
<td>Organizational Behavior (3)</td>
</tr>
<tr>
<td>B A 665</td>
<td>Financial Management I (3)</td>
</tr>
<tr>
<td>STAT 119</td>
<td>Elementary Statistics for Business (3)</td>
</tr>
<tr>
<td>B A 653</td>
<td>Managerial Economics (3)</td>
</tr>
</tbody>
</table>

(or ECON 101 and ECON102)

Students also need an English writing and/or composition course at a university where English is the primary language of instruction, and any other course deficiencies as required by a graduate adviser in the School of Accountancy.

Satisfactory completion means that the student’s grade in each course must be B (3.0) or better and that the course must have been completed within seven years prior to the first course completed on the master’s degree program. The seven year requirement may be waived by the School of Accountancy adviser.

Notice of admission to a curriculum with classified graduate standing will be sent to the student only upon the recommendation of the College of Business Administration and the approval of the dean of the Division of Graduate Affairs.

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy, as described in Part Four of this bulletin.

Specific Requirements for the Master of Science Degree in Accountancy
(Major Code: 05021) (SIMS Code: 221909)

In addition to meeting the requirements for classified graduate standing as described above and the general requirements for master's degrees as described in Part Four of this bulletin, the student must complete a graduate program of at least 30 approved units including at least 21 units in 600- and 700-numbered courses. Of the 30 units, at least 15 units must be in accountancy courses at San Diego State University. At least 12 units of accountancy courses must be numbered 650 and above (in special cases, nine units with adviser approval). Under Plan A, Business Administration 799A, Thesis, is required. Under the optional Plan B, a comprehensive examination and three units of additional coursework may be substituted for the thesis requirement.

Accountancy 620, Financial Reporting and Analysis II; Accountancy 621, Accounting Information Systems; Accountancy 624, Taxation for Managers; Accountancy 625, Managerial and Financial Reporting and Analysis; and Accountancy 626, Auditing and Assurance Services, are required unless the student has completed the equivalent course(s) as a part of their undergraduate preparation.

The program must include at least 24 units in business administration and economics. Not more than a total of six units in courses 797, Research, and 798, Special Study, may be accepted for credit toward the degree.

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Accountancy

The following specializations are available for the Master of Science degree in Accountancy:

Accounting Information Systems
Financial Reporting
Taxation

For regulations concerning grade point average, final approval for the granting of the degree, award of the degree, and diplomas, see the section entitled “Requirements for the Master’s Degree,” in Part Four of this bulletin.

BS/MS 4+1 Degree Program (BMACC)

The BS/MS 4+1 degree program (BMACC) is for students who plan to pursue professional accounting careers in public accounting firms, corporations, and not-for-profit and government organizations. Students must successfully complete 150 units to be awarded simultaneously the B.S. degree in Business Administration, Accounting, and the M.S. degree in Accountancy.

Specific Requirements for the BS/MS 4+1 Degree Program (BMACC)

(Major Code: 05021) (SIMS Code: 221913)

Students must apply and be admitted to the BS/MS 4+1 degree program (BMACC). All students must have a satisfactory score on the Graduate Management Admissions Test, a minimum overall GPA of 3.0. Students may apply for the program at several different points in their academic career: (1) after completing Accountancy 321 with a minimum grade of 3.0, (2) after completing Accountancy 321 with a minimum GPA of 3.0 in these courses, or (3) after completing Accountancy 321, 322, 421 with a minimum average GPA of 3.0 in these courses.

Students attain graduate status when they have earned at least 120 units toward the completion of the BMACC program. No more than nine units may be in 500-level courses to meet the requirements of the master’s program. At least 15 units of 500-, 600-, and 700-numbered courses must be in accountancy (to include Accountancy 522 and 790) and must include at least 12 units in courses numbered 650 and above (in special cases, nine units with adviser approval). Students must achieve an overall 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 an explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

UPPER DIVISION COURSES

ACCTG 501. Advanced Financial Accounting (3)
Prerequisites: Minimum grade of C in Accountancy 322; credit or concurrent registration in Accountancy 421. Proof of completion of prerequisites required: Copy of transcript.
Advanced financial accounting topics. Partnerships, consolidations, foreign currency transactions and financial statements, accounting for derivatives and hedging, accounting for bankruptcy and reorganizations.

ACCTG 503. Federal Taxation of Individuals (3)
Prerequisites: Accountancy 201 and 202. Approved upper division business major, business minor, or other approved major. Proof of completion of prerequisites required: Copy of transcript.
Taxation of individuals, including income, deductions, credits, social security taxes, and property transactions.

ACCTG 505. Fraud Examination (3)
Prerequisite: Accounting 421 or 626.
Skills and tools for auditors, consultants, tax professionals, managers. Techniques and technologies for fraud investigation and interviewing. Case analysis, research of public records, ethical decision-making for accountants. Service learning project.

ACCTG 508. Accounting for Not-For-Profit Organizations (3)
Prerequisite: Minimum grade of C in Accountancy 322. Proof of completion of prerequisite required: Copy of transcript.
Principles of fund accounting useful in state and local governmental units, hospitals, colleges, and universities. Comparisons with commercial accounting emphasized. Includes study of budgetary accounting, appropriations, encumbrances, internal checks and auditing procedures.

ACCTG 522. Current Issues in Accounting Practice and Theory (3)
Prerequisites: Management Information Systems 301, 390W; minimum grade of C in Accountancy 322 (or Accountancy 620 and 625). Credit or concurrent registration in Accountancy 421. Proof of completion of prerequisite required: Copy of transcript.
Accounting information for managerial performance evaluation, advanced financial reporting issues, and international accounting. Include material typically contained in International Accounting, Advanced Accounting, and Management Control Systems. (Formerly numbered Accountancy 422.)

ACCTG 575. Accounting Information Systems (AIS) Development (3)
Prerequisite: Accountancy 322 or 621 with grade of C or better.
AIS theories, databases, and internal controls in designing, maintaining, and enhancing business processes and systems. Hands-on experience to develop skills with EXCEL, ACCESS, and/or other integrated systems.

ACCTG 596. Contemporary Topics in Accounting (1-3)
Prerequisites: Business Administration major approved by the College of Business Administration and consent of instructor.
Contemporary topics in modern accounting. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

ACCTG 620. Financial Measurement and Reporting (3)
Prerequisite: Business Administration 650.
Measurement concepts and mechanics to translate global business transactions into principal financial statements using U.S. and international accounting standards. Revenue recognition, operating assets, investments, debt and equity financing, compensation, EPS, and cash flows.

ACCTG 621. Accounting Information Systems (3)
Prerequisite: Business Administration 650.
Application of accounting information systems to attain organizational objectives, improve planning and control at all levels of the organization. Systems analysis, design methodologies, tools, control frameworks and use of technologies in information systems.

ACCTG 624. Tax for Managers (3)
Prerequisite: Business Administration 650.
Application of federal income tax laws on selected management decisions (e.g., buy/lease decisions, sell/leases), recognition, current and deferred compensation planning). Recognition of tax hazards and tax savings.

ACCTG 625. Managerial Analysis and Financial Reporting (3)
Prerequisites: Business Administration 650 and 660.
Measurement concepts and mechanics to translate business transactions into management and financial reporting information. Cost control and budgeting, inventory, capital assets, leases, deferred taxes, and strategic analysis.
ACCTG 626. Auditing and Assurance Services (3)  
   Prerequisite: Accountancy 620 and 621.  
   Duties, responsibilities, and ethics of the auditor; auditor’s reports  
   and procedures for evaluation of financial statements. Compilation  
   and review standards for assurance services provided to non-public  
   companies.

ACCTG 650. Tax Research and Practice (3)  
   Prerequisite: Accountancy 322, 503, or 624.  
   Tax research methodology; statutory, administrative, and judicial  
   sources of tax law. Tax practitioner regulations, responsibilities, and  
   ethics to include IRS Circular 230, AIPCA Code of Conduct and State-  
   ments on Standards for Tax Services. Tax administration, sanctions,  
   agreements, and disclosures.

ACCTG 651. Seminar in Corporate Tax (3)  
   Prerequisite: Credit or concurrent registration in Accountancy 650.  
   Corporate tax problems involving distributions, liquidations,  
   reorganizations, redemptions, personal holding companies, accumu-  
   rated 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, opera-  
   tions, 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 propri-  
   etorship businesses, sales and exchanges of property, tax deferred  
   transactions in property, accounting periods and methods, and  
   personal deductions.

ACCTG 656. California and Multistate Taxation (3)  
   Prerequisite: Credit or concurrent registration in Accountancy 650.  
   California taxation of individuals, corporations, and other business  
   entities. Treatment of multistate transactions of business organizations  
   and out-of-state transactions of California residents.

ACCTG 659. Seminar in Taxation Topics (3)  
   Prerequisite: Credit or concurrent registration in Accountancy 650.  
   Theoretical treatment of selected topics in taxation. May be  
   repeated with new content. See Class Schedule for specific content.  
   Maximum credit six units applicable to a master’s degree.

ACCTG 660. Seminar in Accounting Theory (3)  
   Prerequisite: Accountancy 620.  
   Theories and concepts underlying global financial reporting.  
   Professional research of authoritative pronouncements issued by the  
   FASB, SEC, and other accounting regulators. Topics include  
   accounting standards setting, measurement, market efficiency,  
   disclosure, earnings quality, professional judgment.

ACCTG 661. Seminar in International Accounting (3)  
   Prerequisite: Business Administration 650.  
   Current financial reporting practices of business entities engaged  
   in international activities; theories and concepts that underlie develop-  
   ment of accounting standards to include cultural and professional  
   dimensions, accounting clusters.

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

ACCTG 670. Seminar in Assurance Services (3)  
   Prerequisite: Accountancy 421 or 626.  
   Selected conceptual issues in assurance services.

ACCTG 671. Seminar in Compilation and Review Services (3)  
   Prerequisite: Accountancy 421 or 626.  
   Applications cases on engagements to compile or review financial  
   statements of nonpublic entities under accounting and review services  
   standards.

ACCTG 675. Seminar in Accounting Information Systems  
   Audit and Control (3)  
   Prerequisite: Accountancy 575 or Management Information Systems  
   687 with a grade of B or better.  
   Risk assessment and management in accounting systems,  
   including impact on clients’ business and audit functions, external and  
   internal auditor issues, internal controls in computerized environ-  
   ments, issues related to Sarbanes-Oxley Act, and application of  
   computer-assisted audit techniques (CAATs) using current audit software.

ACCTG 680. Seminar in Managerial Accounting (3)  
   Prerequisite: Business Administration 660.  
   Managerial cost accounting concepts and procedures, including  
   budgetary planning, cost control, advisory functions, measurement of  
   divisional profitability, product pricing, and investment decisions.

ACCTG 681. Seminar in Regulatory and Management Controls (3)  
   Prerequisite: Business Administration 650.  
   Social, ethical, and behavioral science theories influencing design  
   and operation of corporate governance systems, topics include  
   environmental and regulatory factors that influence, motivate, and  
   control managers and employees.

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

ACCTG 790. Directed Readings in Accountancy (3) Cr/NC  
   Prerequisite: Advancement to candidacy.  
   Preparation for the comprehensive examination for the M.S.  
   program.

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

ACCTG 798. Special Study (1-3) Cr/NC/RP  
   Prerequisite: Consent of staff; to be arranged with department  
   chair and instructor.  
   Individual study. Maximum credit six units applicable to a master’s  
   degree.
Admission to the Executive Financial Planner Advanced Certificate program does not constitute admission to the master's degree programs of the College of Business Administration, which has additional requirements including qualifying scores on the Graduate Management Admissions Test (GMAT).

The advanced certificate requires 18 units; however, the program director may waive up to six units based upon prior coursework and professional credentials. Prerequisites can be waived by the instructor or program director, based upon a student's prior coursework and experience.

Certificate Course Requirements (18 units)

- ACCTG 503 Federal Taxation of Individuals (3)
- FIN 522 Individual Insurance Management (3)
- FIN 590 Personal Financial Planning Practicum (3)
- FIN 651 Seminar in Investments (3)
- FIN 657 Financial and Retirement Planning (3)
- FIN 705 Estate Planning (3)

Students must earn a 3.0 average in these classes in order to earn the certificate. Classes with a grade below a "C" (2.0) may not be included. Students admitted to a master's program may use certificate credit toward a graduate degree in business (Master of Business Administration or Master of Science in Business Administration) with the permission of their graduate adviser.

The adviser for the certificate is Dr. Thomas M.D. Warschauer, Department of Finance. All course units may be used for business majors and concentrations where applicable and approved by the student's graduate adviser.

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

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

UPPER DIVISION COURSES

FIN 522. Individual Insurance Management (3)
Prerequisite: Undergraduate: Completion of lower division requirements for the major. Graduate: Completion of prerequisite core.
Economic, legal, social, and ethical considerations of insurance, liability, and disability insurance. Risk exposure and policy analysis.

FIN 523. Employee Benefit Planning (2)
Prerequisite: Undergraduate: Completion of lower division requirements for the major. Graduate: Completion of prerequisite core.
Employee benefit and pension planning, including regulation and taxation issues.

FIN 585. Estate Planning Issues and Practice (3)
Prerequisite: Undergraduate: Completion of lower division requirements for the major. Graduate: Completion of prerequisite core.
Tax and non-tax issues in establishment of a personal estate plan. Financial and non-financial goals and objectives. Not open to students with credit in Finance 445 or 705.

FIN 589. Personal Financial Planning (3)
Prerequisite: Finance 323.
Financial planning process including data gathering, cash flow and debt considerations. Retirement planning including social security, education funding, practice management considerations including establishment of ethical and legal client relationships.
FIN 590. Personal Financial Planning Practicum (3)
Prerequisite: Credit or concurrent registration in Finance 589 or 657.
Preparation of family financial plans using comprehensive cases and/or real financial data. Financial planning software. Counseling and communication skills, behavioral finance, client psychology, practice standards, discipline and ethics. Students may register once at the undergraduate level and may repeat with new content at the graduate level.

FIN 596. Contemporary Topics in Finance (1-3)
Prerequisites: Business major approved by the College of Business Administration and consent of instructor.
Contemporary topics in modern finance. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

FIN 604. Legal Environment for Executives (3)
Legal environment of business, government regulation, social and ethical considerations in the administration of justice, substantive law of contracts, property, agency, and business organizations.

FIN 617. Financial Management II (3)
Prerequisite: Business Administration 665.
Develops topics to include asset pricing, capital budgeting techniques, dividend policy and financing decisions, applications of options and futures, term structure of interest rates, regulation of financial markets, leasing decisions, corporate control.

FIN 641. Financing the Emerging Enterprise (3)
Prerequisite: Business Administration 665.
Financial considerations in emerging and growing enterprises to include internal financial management, external funding sources, and dealing with venture capitalists. Emphasis on integration of theory, computer analysis, and human judgment in financial decision making.

FIN 642. Financial Risk Management (3)
Prerequisite: Business Administration 665.

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.

FIN 657. Financial and Retirement Planning (3)
Prerequisite: Business Administration 665.
Decision-making process and theory of individual financial needs. Retirement planning including Social Security. Education planning. Financial strategies that aid in meeting family goals.

FIN 659. Decision Making in the World Economy (3)
Prerequisite: Classified graduate standing.
Application of macroeconomic theory to business decision making, study of economic environment and government macroeconomic policy from a business viewpoint.

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

FIN 705. Seminar in Estate Planning (3)
Prerequisite: Business Administration 665.
The scope and nature of estate planning. Identification and analysis of the environmental factors and those aspects of federal and state law affecting estate planning and taxation. Estate taxation and social policy.

FIN 780. Seminar in Land Markets and Urban Development Issues (3)
Prerequisite: Graduate standing.
Land use and policy issues affecting the spatial environments for enterprise decisions. Legal and institutional framework for basic land market functions and operations. Housing market demand and supply determinants. Development issues and models of urban land use.

FIN 783. Seminar in Real Estate Investment and Development (3)
Prerequisite: Graduate standing.
Application of real estate investment and development decisions by corporations, individuals and financial institutions. Market and feasibility analysis, taxation, financing and risk evaluation, portfolio considerations.

FIN 784. Seminar in Real Estate Finance and Valuation (3)
Prerequisite: Graduate standing.
Application of valuation theory to real property and related mortgage instruments in a market context. Market definition, data collection and analysis. Value determinants and new valuation technologies. Special valuation and financing issues and cases.

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

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

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Faculty
Alex F. De Noble, Ph.D., Professor of Management,
Chair of Department
Beth G. Chung-Herrera, Ph.D., Professor of Management
Lori V. Ryan, Ph.D., Professor of Management
Lynn M. Shore, Ph.D., Professor of Management
Gangaram Singh, Ph.D., Professor of Management and Associate
Dean for Academic Affairs of the College of Business
Administration
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Michelle A. Dean, Ph.D., Associate Professor of Management
Karen M. Ehrtart, Ph.D., Associate Professor of Management
(Graduate Adviser)
Martina Musteen, Ph.D., Associate Professor of Management
Amy Randel, Ph.D., Associate Professor of Management
Lawrence C. Rhyne, Ph.D., Associate Professor of Management
(Graduate Adviser)
John D. Francis, Ph.D., Assistant Professor of Management
Congcong Zheng, Ph.D., Assistant Professor of Management
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Courses Acceptable on Master's Degree
Programs in Business Administration (MGT)

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
MGT 596. Advanced Topics in Management (3)
Prerequisite: Six upper division units in management. May be repeated with
new content. See Class Schedule for specific content. Limit of nine
units of any combination of 296, 496, 596 courses applicable to a
bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's
degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES
MGT 626. Competitive Analysis of Industries (3)
Prerequisite: Business Administration 651.
Concepts and tools for studying structure of industries and
processes of structural change in industries. Implications of public
policy decisions and competitive actions on strategy formulation are
explored in several industry settings.

MGT 669. Human Resource Management (3)
Prerequisite: Business Administration 651.
Design of organizational systems for accomplishing work through
individuals and groups. Strategic, legal, and ethical considerations in
staffing, appraising, developing, and rewarding people at work.

MGT 672. International Human Resource Management (3)
Prerequisite: Business Administration 651.
Managing human resources in a global economy: theories, imple-
mentation, and evaluation of IHRM.

MGT 696. Seminar in Selected Topics (3)
Intensive study in specific areas of management. May be repeated with
new content. See Class Schedule for specific content. Maximum
credit six units applicable to a master's degree. Credit for 596 and 696
applicable to a master's degree with approval of the graduate adviser.

MGT 710. Seminar in World Business Environment (3)
Prerequisite: Business Administration 651.
Nature, dimensions and motives of international business. Impact
of environmental factors. Nature of multinational corporation, impor-
tance of national and multilateral controls and policies for international
business management.

MGT 721. Seminar in Group Processes and Leadership (3)
Prerequisite: Business Administration 651.
Perceptions and processes in work groups. Experience in interper-
sonal 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, share-
holders, 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.
General management problems in directing and controlling transna-
tional companies, including entry, acquisitions and joint ventures.
Cases and readings to acquaint students with worldwide business
practices.

MGT 724. Entrepreneurship (3)
Prerequisite: Business Administration 651.
Examination of the entrepreneurial approach; concepts, theory
and techniques of managerial innovation and implementation;
analysis of entrepreneurial skills.

MGT 725. Seminar in Negotiations (3)
Prerequisite: Business Administration 651.
Negotiation principles with emphasis on international business
contexts. Basic concepts, skills, and simulations of negotiation
processes.

MGT 729. Seminar in Organizational Issues (3)
Prerequisite: Business Administration 651.
Issues in organizations in modern society: organization design,
environmental interface, and political processes. See Class Schedule
for specific content. Maximum credit six units applicable to a master's
degree.

MGT 731. Seminar in Strategic Management of Technology and
Innovation (3)
Prerequisite: Completion of MBA core or MS prerequisites.
Assessment of technological competencies and formulation of
entry strategies for high-technology markets. Managing project teams
and high-technology professionals.

MGT 743. Seminar in Business Plan Development (3)
Prerequisite: Management 724.
Principles and techniques for developing a business plan.

MGT 744. Seminar in Managing the Growing Firm (3)
Prerequisite: MBA core or admission to degree curriculum for M.S.
degree business administration.
Problems and issues confronting entrepreneurs beyond start-up of
a new venture. Focus on issues from both entrepreneur and investor
perspectives.

MGT 745. Seminar in Corporate Entrepreneurship (3)
Prerequisite: MBA core.
Challenges and issues confronting organizations seeking to
pursue new business opportunities. Senior management charged with
the mandate of pursuing new business opportunities and employees
desiring to champion new ventures under corporate umbrella.
MGT 746. Seminar in Corporate Governance (3)
Prerequisite: Classified graduate standing.
Roles and interrelationships among members of corporate governance triad: managers, directors, and shareholders. History and theories of corporate governance, ethical obligations underlying the three roles, and case studies.

MGT 747. Seminar in Managing Technology Commercialization (3)
Prerequisite: Graduate standing.
Assessment of future commercialization potential of early stage technologies. Technology commercialization process including technology and market assessments, business models, revenue streams, licensing, and protection of intellectual property.

MGT 748. Seminar in International Entrepreneurship (3)
Prerequisite: Business Administration 651.
Challenges and issues confronting entrepreneurs seeking to pursue international business opportunities. Concepts, theory, and techniques of international entrepreneurship. Drivers of entrepreneurship and assessment of entrepreneurial conditions around the world.

MGT 749. Family Business Management (3)
Prerequisite: MBA core.
Issues uniquely related to management of a family business. Use of systems perspective on family business to deepen understanding of role requirements of family members to both business and family including succession planning.

MGT 790. Directed Readings in Management (3) Cr/NC
Prerequisite: Advancement to candidacy.
Preparation for the comprehensive examination for those students in the MSBA program under Plan B.

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

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

In the College of Business Administration

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Faculty

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James R. Beatty, Ph.D., Professor of Management Information Systems
Alexis Koster, Ph.D., Professor of Management Information Systems (Graduate Adviser)
John M. Penrose, Ph.D., Professor of Management Information Systems
Feraidoon Raafat, Ph.D., Professor of Management Information Systems (Graduate Adviser)
Bongskul Shin, Ph.D., Professor of Management Information Systems (Graduate Adviser)
Yeongling Helio Yang, Ph.D., Professor of Management Information Systems
Theophilus Addo, Ph.D., Associate Professor of Management Information Systems
Annette C. Easton, Ph.D., Associate Professor of Management Information Systems
George K. Easton, Ph.D., Associate Professor of Management Information Systems
Murray Jennex, Ph.D., Associate Professor of Management Information Systems
Robert Plice, Ph.D., Associate Professor of Management Information Systems

Master of Science Degree in Information Systems

General Information

The objective of the Master of Science degree in information systems is to prepare students to take a senior position associated with the information systems field across all private industries and public sectors. With the broadening spectrum of the information systems field and subsequent rich set of career opportunities, there is an ongoing need to educate students so that they can take leadership positions in both established and emerging fields of information systems. To serve the student and industry needs effectively, the program is designed to balance management knowledge of business and technology, general technical knowledge in information systems, and domain knowledge in the special area selected by the student. Upon successful completion of the program, students will be competent in leading organizations in the evaluation and adoption of information systems and technologies for strategic advantage as well as in bridging the cultural and communication gaps that often exist between information systems and business function professionals.

Admission to the Degree Curriculum

In addition to meeting the requirements for classified graduate standing and the general requirements for master's degrees as described in Part Two of this bulletin, the student must have satisfactorily completed equivalents of the following courses as prerequisites:

- MIS 180  Principles of Information Systems (3)
- MIS 315  Business Application Programming (3)
- B A 650  Financial Reporting and Analysis I (3)
- B A 655  Marketing (3)
- B A 662  Operations and Supply Chain Management (3)

Notice of admission with classified graduate standing will be sent to the student upon the recommendation of the College of Business Administration and the approval of the dean of the Division of Graduate Affairs.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Four of this bulletin. Students concurrently enrolled in deficiency coursework may be given permission to take the comprehensive examination prior to actual completion of all coursework. However, comprehensive examinations will not be evaluated and results will not be reported to the Division of Graduate Affairs until all deficiency coursework has been successfully completed. This may delay graduation.

Specific Requirements for the Master of Science Degree in Information Systems

(Major Code: 07021)

In addition to meeting the requirements for classified graduate standing as described above and the general requirements for master's degrees as described in Part Four of this bulletin, the student must complete a graduate program of at least 36 approved units including at least 27 units in 600- and 700-numbered courses. Up to nine units of coursework may be accepted as transfer credit. Not more than a total of three units in courses Business Administration 799A, Thesis, and Management Information Systems 798, Special Study, may be accepted for credit toward the degree. With approval of the graduate adviser, a substitute course may be allowed in place of a required course after reviewing student credentials.

Required core courses:

IS Technology (15 units)
- MIS 666  Database Management Systems (3)
- MIS 667  Data Communications and Distributed Data Processing (3)
- MIS 695  Information Systems Development I (3)
- MIS 697  Information Systems Development II (3)
- MIS 752  Seminar in Supply Chain Planning and Control (3)

IS Management (12 units)
- MIS 688  Information Systems in Organizations (3)
- MIS 750  Project Management (3)
- MIS 755  Information Systems Security Management (3)
- MIS 790  Directed Readings in Management Information Systems (3) Cr/NC

OR
- MIS 797  Research (3) Cr/NC/RP

Career Track (9 units)

Students select a career track and courses with the approval of the graduate adviser.

The Master of Science in information systems requires Plan A, Thesis or Plan B, a directed readings in information systems or a written comprehensive examination offered by the department. The program must be approved by the college and departmental adviser. For regulations concerning grade point averages, final approval for the granting of the degree, award of the degree, and diplomas, see the section entitled Basic Requirements for the Master's Degree, in Part Four of this bulletin.
Courses Acceptable on Master’s Degree Programs in Business Administration (MIS)

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

**UPPER DIVISION COURSES**

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

**MIS 520. Advanced Programming for Business Applications (3)**
Prerequisite: Management Information Systems 515.
Prerequisite: Intermediate programming for business applications using graphical user interfaces. Use of multithreading for business simulation. Enhancement of business applications with multimedia and database connectivity. (Formerly numbered Information and Decision Systems 520.)

**GRADUATE COURSES**

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

**MIS 610. Electronic Business Technologies (3)**
Prerequisite: Classified graduate standing.
Basic concepts of e-business technologies. Development tools, languages, processes, and methodologies for electronic business applications. (Formerly numbered Information and Decision Systems 610.)

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

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

**MIS 680. Information Systems Hardware and Software (3)**
Prerequisite: Classified graduate standing.
Computer architecture, programming languages, programming systems, and operating systems. (Formerly numbered Information and Decision Systems 680.)

**MIS 686. Database Management Systems (3)**
Prerequisite: Classified graduate standing.
Applications of database management systems in business. Design and administration of database processing systems applications. (Formerly numbered Information and Decision Systems 686.)

**MIS 687. Data Communications and Distributed Data Processing (3)**
Prerequisite: Classified graduate standing.
Applications of data communications hardware, software, and services in business data processing. Design and implementation of network applications and distributed processing systems. (Formerly numbered Information and Decision Systems 687.)

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

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

**MIS 695. Information Systems Development I (3)**
Prerequisite: Classified graduate standing.
System development life cycle. Life cycle methodologies with emphasis on analysis of requirements using structured methodology and automated tools. Feasibility study, developmental strategies, needs management, and prototyping. (Formerly numbered Information and Decision Systems 695.)

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

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

**MIS 705. Communication Strategies (3)**
Prerequisite: Classified graduate standing.
Development of advanced written, oral, and interpersonal communication strategies for the business environment. (Formerly numbered Information and Decision Systems 705.)

**MIS 744. Seminar in Lean Six Sigma and Baldrige Quality Management (3)**
Prerequisite: Business Administration 662.
Applications of lean principles, Six Sigma methodology, and Baldrige processes for business quality, agility, improvement. Advanced concepts, methods, lean tools, statistical quality tools for process improvement. (Formerly numbered Information and Decision Systems 744.)

**MIS 748. Seminar in Applied Multivariate Analytics (3)**
Prerequisite: Business Administration 652.
Applications of various statistical techniques and design of experiments for business. Advanced ANOVA and Taguchi designs, multiple regression modeling methodologies, and multivariate techniques, such as factor analysis, judgment analysis, multiple discriminant analysis, multivariate analysis of variance, and canonical correlation. (Formerly numbered Information and Decision Systems 748.)

**MIS 749. Seminar in Applied Behavioral Measurement (3)**
Prerequisite: Business Administration 652.
Measurement procedures useful in analyzing such areas as teamwork, leadership, job satisfaction, attitudes, motivation, total quality management, and customer satisfaction. Development and use of technologies including Likert, Thurstone, Guttman, paired-comparison, forced-choice, semantic-differential, C-E diagrams, and review of existing instruments used in business-related settings. (Formerly numbered Information and Decision Systems 749.)
MIS 750. Project Management (3)  
Prerequisite: Business Administration 662.  
Managing projects. Includes network modeling, defining activities and events, cost estimating and reporting, single and multiple resource allocation and leveling. Computerized project management software will be used. (Formerly numbered Information and Decision Systems 750.)

MIS 752. Seminar in Supply Chain Planning and Control (3)  
Prerequisite: Business Administration 662.  
Methodology and theory to plan and control operations and supply chain. Topics include bill of materials, sales and operations planning, master scheduling, materials requirement planning and scheduling, capacity planning, product design, and process selection. (Formerly numbered Information and Decision Systems 752.)

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

MIS 754. Seminar in Operations Strategy (3)  
Prerequisite: Business Administration 662.  
Strategic issues in operations and their integration with other functional areas. Includes operations strategy, product and process planning, experience curves, productivity measurements, and information technology implementation. (Formerly numbered Information and Decision Systems 754.)

MIS 755. Information Systems Security Management (3)  
Prerequisite: Classified graduate standing.  
Information systems management. Focus on creation of a security plan for an organization to include risk analysis, security issues, security design, security plan, disaster recovery/business continuity, and threat analysis. (Formerly numbered Information and Decision Systems 755.)

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

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

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

For additional courses applicable to the Master of Science degree in Information Systems see:  
Business Administration 652. Statistical Analysis
Marketing
In the College of Business Administration

OFFICE: Student Services 3356
TELEPHONE: 619-594-5317 / FAX: 619-594-3272

Faculty
George E. Belch, Ph.D., Professor of Marketing,
Chair of Department
Michael A. Kartalija, Ph.D., Professor of Marketing
Kathleen A. Krentler, D.B.A., Professor of Marketing
Massoud M. Saghaifi, Ph.D., Professor of Marketing
Pradeep K. Tyagi, Ph.D., Professor of Marketing
(MBA Graduate Adviser)
Heather L. Honea, Ph.D., Associate Professor of Marketing
Paula Peter, Ph.D., Assistant Professor of Marketing

Heather L. Honea, Ph.D., Associate Professor of Marketing
Pradeep K. Tyagi, Ph.D., Professor of Marketing
Massoud M. Saghaifi, Ph.D., Professor of Marketing
Kathleen A. Krentler, D.B.A., Professor of Marketing
Michael A. Kartalija, Ph.D., Professor of Marketing
(MKTG)

Programs in Business Administration

Courses Acceptable on Master's Degree

Programs in Business Administration

(MKTG)

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

GRADUATE COURSES

MKTG 696. Seminar in Selected Topics (3)
Intensive study in specific areas of marketing. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser. (Formerly numbered Marketing 795.)

MKTG 701. Seminar in Marketing Planning and Programs (3)
Prerequisite: Business Administration 655.
Analysis and planning of marketing programs. Emphasis on quantitative assessment, market measurement and forecasting, budgeting, organization and development of marketing strategy. Integration of marketing programs concerning product plans, pricing, promotion and distribution.

MKTG 729. Contemporary Issues in Marketing Theory and Practice (3)
Prerequisite: Business Administration 655.
Issues in marketing theory and practice: examination and application of contemporary theories and techniques in relation to changes in marketing environment. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

MKTG 760. Seminar in Consumer Behavior (3)
Prerequisite: Business Administration 655.
The study of consumer behavior in relation to marketing strategy and the changing environment of business.

MKTG 761. Product Innovation Management (3)
Prerequisite: Business Administration 655.
New product development and issues related to overall management of product innovation in context of entrepreneurial opportunity, start-up ventures and existing organizations. Focus on planning, design, and implementation of marketing strategy.

MKTG 762. Seminar in Integrated Marketing Communication (3)
Prerequisite: Business Administration 655.
Theory and application of integrated marketing communication to advertising, promotions, public relations/publicity, personal selling and direct marketing (including Internet).

MKTG 763. Seminar in Sales Management (3)
Prerequisite: Business Administration 655.
Sales management and personal selling decisions and strategies in business organizations.

MKTG 766. Seminar in Marketing Research (3)
Prerequisite: Business Administration 652 and 655.
Research methods and analysis for consumer and business marketing. Research design and implementation, use of secondary data sources, qualitative research, survey research, experimentation, and data analysis using statistical software, such as SPSS.

MKTG 767. Seminar in Business Marketing Management (3)
Prerequisite: Business Administration 655.
Management of marketing decisions particular to organizational customers and prospects. Emphasizes marketing to private, commercial, institutional, and governmental customers in both domestic and global markets.

MKTG 768. Seminar in Internet Marketing and E-Business (3)
Prerequisite: Business Administration 655.
Theory and application of marketing utilizing the Internet and associated issues of electronic commerce.

MKTG 769. Seminar in International Marketing (3)
Prerequisite: Business Administration 655.
The impact of cultural, social, political, economic, and other environmental variables on international marketing systems and the decision-making process of multinational marketing operations.

MKTG 770. Marketing of Technology (3)
Prerequisite: Business Administration 655.
Marketing of high-technology products in fast-paced business environments. Concepts and practices related to development of marketing strategies and programs for technology including product, pricing, channel, and communications strategies. Technological innovations and marketing implications.

MKTG 772. Strategic Brand Management (3)
Prerequisite: Business Administration 655.
Planning, managing, and evaluating brand strategies. Theories, models, concepts, and techniques used to build, measure, and manage brand equity. Marketing decisions faced by an organization in managing brands for long-term profitability.

MKTG 777. 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.
Chemistry

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

OFFICE: Geology/Mathematics/Computer Science 209
TELEPHONE: 619-594-5595 / FAX: 619-594-4634
E-MAIL: cheminfo@sci.sdsu.edu
http://www.sci.sdsu.edu/chemistry

Faculty
Carl J. Carrano, Ph.D., Professor of Chemistry and Biochemistry, Chair of Department
Andrew L. Cockey, Ph.D., Professor of Chemistry and Biochemistry
Douglas B. Grojahn, Ph.D., Professor of Chemistry and Biochemistry (Graduate Admissions Adviser)
Shelli R. McAlpine, Ph.D., Professor of Chemistry and Biochemistry
William E. Stumph, Ph.D. Professor of Chemistry and Biochemistry
William G. Tong, Ph.D., Distinguished Professor of Chemistry and Biochemistry
B. Mikael Bergdahl, Ph.D., Associate Professor of Chemistry and Biochemistry
Dale A. Chatfield, Ph.D., Associate Professor of Chemistry and Biochemistry
Thomas E. Cole, Ph.D., Associate Professor of Chemistry and Biochemistry (Graduate Adviser)
Tom Huxford, Ph.D., Associate Professor of Chemistry and Biochemistry
John J. Love, Ph.D., Associate Professor of Chemistry and Biochemistry
David P. Pullman, Ph.D., Associate Professor of Chemistry and Biochemistry (Undergraduate Adviser)
Diane K. Smith, Ph.D., Associate Professor of Chemistry and Biochemistry
Peter van der Geer, Ph.D., Associate Professor of Chemistry and Biochemistry
Laurence G. Beauvais, Ph.D., Assistant Professor of Chemistry and Biochemistry
Miriam V. Bennett, Ph.D., Assistant Professor of Chemistry and Biochemistry
Christopher R. Harrison, Ph.D., Assistant Professor of Chemistry and Biochemistry
Gregory Kalyuzhny, Ph.D., Assistant Professor of Chemistry and Biochemistry

Associateships
Graduate teaching associateships and graduate nonteaching associateships in chemistry are available to a limited number of qualified students. Graduate teaching associateships can be valuable for applicable degree programs, preparing students for a teaching career. Application blanks and additional information may be secured from the Department of Chemistry and Biochemistry Web site at http://www.chemistry.sdsu.edu/graduate/forms/.

General Information
The Department of Chemistry and Biochemistry offers graduate study leading to the Master of Arts, the Master of Science and the Doctor of Philosophy degrees in chemistry. The Ph.D. degree is offered jointly with the Department of Chemistry at the University of California, San Diego. Thesis research in all graduate programs is offered in the five traditional areas of chemistry, i.e., analytical chemistry, biochemistry, inorganic chemistry, organic chemistry, and physical chemistry.

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

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

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

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

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

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

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

Department of Chemistry and Biochemistry
The following materials should be mailed or delivered to:

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

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

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

(3) Departmental Graduate Program Application form. Refer to http://www.chemistry.sdsu.edu/graduate/forms/ to download application form.
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 790 or 791 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, McAuliffe, Metzger, Pullman, Roeder, Smith, Stumph, Tong

University of California, San Diego:
Vice Chair of Graduate Education: Daniel Donoghue
Committee Members: Herrmann, 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 360A.)

CHEM 562. Intermediary Metabolism (2)
Prerequisite: Chemistry 365 or 560.
Catabolic and biosynthetic pathways of carbohydrate, lipid, amino acid, and nucleotide metabolism; TCA cycle, mitochondrial and chloroplast electron transport chains, ATP generation and their interactions and control. Not open to students with credit in Chemistry 361.

CHEM 563. Nucleic Acid Function and Protein Synthesis (2)
Prerequisite: Chemistry 365 or 560.
DNA replication, RNA transcription, RNA processing, and protein translation, including chemical mechanisms of synthesis and cellular mechanisms of regulating gene expression; genomics, recombinant DNA, and DNA topology. Not open to students with credit in Chemistry 361.

CHEM 564. Receptor Biochemistry and Protein Modification (2)
Prerequisite: Chemistry 365 or 560.
Biochemical study of receptors, second messengers, and cellular proteins that participate in extracellular and intracellular communication, with focus on protein structures, post-translational modifications, and biochemical mechanisms that regulate receptors and effector enzymes.

CHEM 567. Biochemistry Laboratory (3)
One lecture and six hours of laboratory.
Prerequisite: Chemistry 560.
Theory and practice of procedures used in study of life at molecular level. Includes purification and characterization of enzymes, isolation of cell components, and use of radioactive tracer techniques.

CHEM 571. Environmental Chemistry (3)
Prerequisites: Chemistry 232, 232L, 251; consent of instructor for all other majors.
Fundamentals of chemistry applied to environmental problems. Chemistry of ecosystems; analysis of natural constituents and pollutants; sampling methods; transport of contaminants; regulations and public policy.

CHEM 596. Advanced Special Topics in Chemistry (1-3)
Prerequisite: Consent of instructor.
Advanced selected topics in modern chemistry. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

CHEM 695. Graduate Education in Chemistry (3)
Prerequisite: Concurrent registration in chemistry course at 500-level or higher.
Skills and knowledge needed for success in chemistry graduate program to include techniques for successful teaching, key safety protocols, ethical issues in teaching and research, department research programs, effective means of finding and communicating chemical information.

CHEM 711. Chemical Thermodynamics (3)
Prerequisite: Chemistry 410B.
Chemical thermodynamics and an introduction to statistical thermodynamics.

CHEM 712. Chemical Kinetics (3)
Prerequisite: Chemistry 410B.
Theory of rate processes; applications of kinetics to the study of reaction mechanisms.

CHEM 713. Quantum Chemistry (3)
Prerequisite: Chemistry 410B.
Quantum mechanics of atomic and molecular systems; applications to chemical bonding theory.

CHEM 730. Advanced Topics in Organic Chemistry (1-3)
Prerequisites: Chemistry 432, 432L.
Selected topics in organic chemistry. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.
CHEM 731. Mechanisms of Organic Reaction (3)
Prerequisites: Chemistry 410B, 432, 432L.
Reactivity and mechanism in organic reactions.

CHEM 750. Advanced Topics in Analytical Chemistry (1-3)
Prerequisite: Chemistry 550.
Selected topics from the field of analytical chemistry. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

CHEM 751. Separations Science (3)
Prerequisites: Chemistry 550 and 711.
Theoretical bases for separation techniques important in analytical chemistry. Chemical and physical interactions between components of different classes of separation systems, including selection and optimization of operational parameters.

CHEM 752. Mass Spectrometry (3)
Prerequisites: Chemistry 410B and 550.
Theory and practice in analysis of volatile and involatile organic and inorganic compounds, basic design principles, theory of ionization processes; interpretation of mass spectra.

CHEM 753. Analytical Spectroscopy (3)
Prerequisite: Chemistry 550.

CHEM 754. 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 compon-ents: 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.
Chicana and Chicano Studies

In the College of Arts and Letters

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

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

Associateships and Assistantships
Graduate teaching associateships and graduate assistantships in Chicana and Chicano studies are available to a limited number of qualified students. Application forms and additional information may be obtained from the graduate adviser in the Department of Chicana and Chicano Studies or at http://www.gau.sdsu.edu.

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

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

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

The master’s degree also provides advanced training for those who want to pursue professional degrees in the fields of public health, education, counseling, law, and social work. The master’s degree provides students with the ability to work with professional competence in U.S.-Mexico environments involving populations of Mexican and Latin American origin in both the private and public sector. A master’s degree in Chicana and Chicano Studies at San Diego State University prepares students for a professional career in teaching by providing students with university-level teaching experience and access to community college teaching positions.

Admission to Graduate Study
The application deadlines are posted on the Web or can be obtained from the graduate adviser. All students must satisfy the general requirements for admission to the university with classified graduate standing as described in Part Two of this bulletin. In addition, students must demonstrate sufficient preparation for the program. This may include a bachelor’s degree in Chicana and Chicano studies or a related discipline from an accredited institution or completion of equivalent academic preparation as determined by the Graduate Dean. Evaluation of a student's transcript will be made on an individual basis by the admissions committee to determine whether evidence of sufficient preparation can be demonstrated. A student whose preparation is deemed insufficient by the admissions committee may be admitted as conditionally classified and will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

The grade point average required for admission to the master's program in Chicana and Chicano Studies is 3.0 for the last 60 units (2.85 overall) of the student's undergraduate work plus satisfactory scores on the verbal and quantitative sections of the GRE.

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

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

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

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

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

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

Department of Chicana and Chicano Studies
The following materials should be mailed or delivered to:
Department of Chicana and Chicano Studies
(Attention: Graduate Coordinator)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-6034

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

(2) Statement of purpose;

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

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy as described in Part Four of this bulletin.

Specific Requirements for the Master of Arts Degree
(Major Code: 22131) (SIMS Code: 114910)

In addition to meeting the requirements for the Master of Arts degree, as described in Part Four of this bulletin, the student must complete at least 30 units of graduate coursework with a core of courses to include: Chicana and Chicano Studies 601, 602, 605, 798. Students must complete a specialization in Chicana Studies or Borderland Studies. For students specializing in gender, Chicana and Chicano Studies 554 or Sociology 554 is required. For students specializing in Borderland Studies, Chicana and Chicano Studies 595 is required. Specialization courses in either of these areas must be approved by the graduate adviser.
The total program shall include a minimum of 15 units in 600- and 700-numbered courses. Students may select either Plan A or Plan B in consultation with the graduate adviser. Students electing Plan A must complete 799A (Thesis). Students electing Plan B must select one additional course in lieu of 799A and pass a comprehensive written examination.

Courses Acceptable on Master’s Degree Program in Chicana and Chicano Studies (CCS)

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

UPPER DIVISION COURSES

CCS 525. Race in Mexico: From Conquest to the Revolution (3)
(Same course as Latin American Studies 525)
Prerequisite: Upper division or graduate standing.
Ways race and racial identities have been constructed in Mexico from early 1500s through 1940. Caste system, ideologies of mestizaje and indigenismo and their impact on revolutionary nationalism.

CCS 554. United States-Mexico Transborder Populations and Globalization (3)
(Same course as Sociology 554)
Prerequisite: Sociology 101. Recommended: Chicana and Chicano Studies 355 and/or Sociology 350.

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

GRADUATE COURSES

CCS 601. Foundations in Chicana and Chicano Scholarship Seminar (3)
Prerequisite: Graduate standing.
Philosophical, cultural, social thought, and intellectual traditions shaping Chicana and Chicano scholarship. Key paradigms of gender, ethnicity, and socio-economic change.

CCS 602. Methods of Inquiry in Chicana and Chicano Studies Seminar (3)
Prerequisite: Graduate standing.
Research methods in Chicana and Chicano studies including evaluation of reported findings. Emphasis on multidisciplinary perspectives.

CCS 605. Borderlands and Feminist Theories (3)
Prerequisite: Graduate standing.
Major theories pertaining to U.S.-Mexico borderlands and their gendered and sexual discourses: Chicana feminism, transnationalism, cultural studies, ethnography, narrative, cultural, citizenship, and multiculturalism.

CCS 696. Topics in Chicana and Chicano Studies (3)
Prerequisite: Graduate standing.
Key issues in Chicana and Chicano studies. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

CCS 798. Special Study (1-3) Cr/NC/RP
Prerequisite: Consent of graduate adviser.
Independent study. Maximum credit six units applicable to a master’s degree.

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

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

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

In the College of Education

OFFICE: Education and Business Administration 403
TELEPHONE: 619-594-5380 / FAX: 619-594-5921
E-MAIL: cdev@mail.sdsu.edu

Faculty

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

Faculty Committee for Child and Family Development
Stuart C. Aitken, Ph.D., Professor of Geography
Thereasa A. Cronan, Ph.D., Professor of Psychology
Shoshana A. Grossbard, Ph.D., Professor of Economics
Melbourne F. Hoveil, Ph.D., Distinguished Professor of Public Health
Vanessa L. Malcarne, Ph.D., Professor of Psychology
Gerald Monk, Ph.D., Professor of Counseling and School Psychology
Joseph M. Price, Ph.D., Professor of Psychology
Judy S. Reilly, Ph.D., Professor of Psychology
Brian H. Spitzberg, Ph.D., Professor of Communication
André J. Branch, Ph.D., Associate Professor of Teacher Education
Adelaida R. Del Castillo, Ph.D., Associate Professor of Chicana and Chicano Studies
Margaret Field, Ph.D., Associate Professor of American Indian Studies

*Serves on the Faculty Governing Board which makes recommendations on admissions, curriculum, and thesis committee membership.

For information regarding graduate teaching associate positions, coursework, and research leading to a Master of Science degree in child development, contact the adviser, Dr. Shulamit N. Ritblait.

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 associate positions and graduate assistantships in child development may be available to a limited number of qualified students.

Master of Science Degree in Child Development

The Master of Science degree in child development is one of only four child development programs available in the CSU. With 101 community college child development programs in California and 17 undergraduate programs within the CSU system, the M.S. program in child development plays a major role in training professionals for the State and region. The Department of Child and Family Development plays a leadership role in integration of curricula for community colleges and the CSU. 1

Child development is an interdisciplinary area of study. The Master of Science degree, administered by the faculty from the Department of Child and Family Development, draws on the expertise of a multidisciplinary faculty who are committed to the study of children within the context of diverse families and communities. The focus of the department is on the study of social emotional development as the underlying foundation for all other areas of development including physical, cognitive, motor and language. The program represents an interdisciplinary field of study with a basic assumption that development takes place across the lifespan in the context of the family, community, and public policy. The department’s emphasis on primary prevention prepares students with hands-on experiences through community-based learning.

The focus of the program is on the early years and prevention with an emphasis on parent-child intergenerational relationships to enhance school readiness and preparation of teachers to work with families with a focus on socio-emotional and behavior support in educational settings and homes. Faculty areas of study include attachment, socio-emotional development and school readiness, continuity of care, child abuse and relationship violence, intergenerational relationships, and parent education and involvement in education. Faculty work in collaboration with community agencies and programs to include but are not limited to: SDSU Children’s Center, Head Start, First 5, San Diego Unified School District, San Diego County Office of Education, San Diego County Health and Human Services—Office of Violence Prevention, San Diego County Health and Human Services Child and Adolescent Services, Children Mental Health Services, YMCA, Exceptional Family Resource Center, Home Star, among others. Students can choose a research project or thesis. In addition to the thesis, there are projects on agencies and programs in the community. Students will have the opportunity to develop projects in the community and implement best practices of continuity of care and intergenerational programs, etc.

Grades with the Master of Science (but without the certificate), and graduates with the certificate qualify for administrator, coordinator, or service provider positions in preschools, day care centers, schools, hospitals, hospice centers, public welfare agencies, family service agencies, family planning clinics, community programs, business and industry, and government agencies. Graduates with the EC-SEBRIS certificate also qualify for positions related to early childhood mental health and behavioral health. Graduates from the Master of Science program also qualify as community college instructors and can continue their education for the doctoral degree in human development or a related field.

Admission to Graduate Study

Students will be admitted to the graduate program in child development only after careful consideration of their qualification by the child development faculty. All students must satisfy the general requirements for admission to the university with graduate standing as described in Part Two of this bulletin. Students who do not fully meet the requirements for admission with classified graduate standing may be considered for conditionally classified graduate standing upon recommendation of the admissions committee and the graduate adviser. In addition, a student applying for admission to the graduate program in child development, including those who hold the EC-SEBRIS certificate, must meet the following graduate admission requirements.

To qualify for admission to the master’s program in child development, the student must have:

1. A bachelor’s degree in child development or related fields or consent of the Child Development Faculty Governing Board.
2. Completion of prerequisites for the program of study. If students’ undergraduate preparation is deemed insufficient, students will be required to complete specified courses (Child and Family Development 375A, 375B, 375C, and two units from Child and Family Development 376A, 376B, 378C, 378D) in addition to the minimum 31-32 units required for the master’s degree in child development.
3. A grade point average of 3.0 in the last 60 semester units attempted.

1 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.
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](http://www.csumentor.edu) along with the $55 application fee.

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

**Graduate Admissions**

The following materials should be mailed or delivered directly to:

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

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

   Note:
   - Students who attended SDSU need only submit transcripts for work completed since last attendance.
   - Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.
   - Students with international coursework must submit an evaluation report to be considered for admission. Evaluation reports must be detailed, course-by-course evaluations with equivalent US credits and grades. Once completed, the detailed evaluation report should be sent directly to the Graduate Admissions office. SDSU recommends the following evaluation services:

   **Course-by-Course Evaluation Report**
   Educational Credential Evaluators, Inc.
   P.O. Box 514070
   Milwaukee, WI 53203-3470
   414-289-3400

   **Detail Evaluation Report**
   International Education Research Foundation, Inc.
   P.O. Box 3665
   Milwaukee, WI 53203-3470
   414-289-3400

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

**Department of Child and Family Development**

The following materials should be mailed or delivered directly to:

**Department of Child and Family Development**

Department of Child and Family Development Office of Graduate Advising
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7416

1. Applicant’s letter of intent which includes reason for seeking the degree and career goals;
2. Three letters of recommendation, one of which must be from an academic reference and another from an occupational reference;
3. A resume;
4. A written personal statement by the applicant discussing background, interests, work experiences, abilities, and career goals as they apply to the applicant’s desire for a graduate degree in child development;
5. Completion of a telephone or in-person interview conducted by one or more members of the child development faculty.

**Advancement to Candidacy**

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

**Specific Requirements for the Master of Science Degree in Child Development**

(Major Code: 08231) (SIMS Code: 330909)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, students must complete a graduate program of 31-32 units, to include at least 22 units of 600- and 700-numbered courses.

Students pursuing only the Master of Science degree in child development must complete:
1. A core sequence of five courses to include Child and Family Development 634, 660 (four units required), 670, 790, and Education 690 (16 units).
2. A three unit graduate course selected in conjunction with the program adviser.
3. Nine units of any 500-level child and family development courses.
4. Nine units of any 500-level child and family development courses.

Graduate students who are alumni of the child and development program and received their Bachelor of Science degree in child development from San Diego State University, will complete the child and family development 500-level classes they did not take as part of their undergraduate program, and will select the remaining classes (to complete nine units) from other programs with the approval of the graduate adviser.

4. Child and Family Development 799A (Plan A) or 798 (Plan B).

**NOTE:** Students who have completed or are concurrently pursuing the EC-SEBRIS certificate will have earned 18 units towards the Master of Science in child development and need to complete 14 additional units: Child and Family Development 634, 660 (1 unit per semester for total of 2 units), Education 690, Child and Family Development 790, and 799A (Plan A) or 798 (Plan B).

**Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRIS) Certificate**

The certificate program in Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRIS) is an interdisciplinary program focusing on professional preparation and skills enhancement of early childhood educators who work with young children who demonstrate socio-emotional and behavioral problems and their parents.

Eighteen program units are required to earn the certificate in Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRIS). Twelve units of seminar courses addressing core knowledge foundations and six units of practicum/field experience. Courses in the certificate program may be applied to the master’s degree in child development if applicable.

Prerequisites for admission:
1. Successful completion of a bachelor’s degree in a field related to child development, psychology, social work, human development, school counseling, or social services from an accredited institution, and relevant work experience in the early childhood education field.
2. Successful completion of the application and interview process.
3. Coursework relating to: early years of development, parenting, family functioning and parent-child relationships, children with special needs, and theories in socio-emotional development. If students’ undergraduate preparation is deemed insufficient, students will be required to complete specified courses as determined by the certificate program’s adviser.
4. Recommendation of employer and/or director of certificate program.
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 Infant, Preschool and Family Mental Health Initiative (Workforce 2010). It includes two main areas: knowledge and experience. The knowledge base is comprised of four foundation classes. Two practicum courses that include clinical experience/supervision in early childhood setting and programs accompanied by Reflective Practice Facilitation (total of 500 hours of supervised practicum).

Students must complete the course requirements with a minimum 3.0 (B) grade point average.

**Knowledge Area (12 units):**

- **CFD 670** Seminar in Child Development Theories – Intervention and Prevention (3)
- **CFD 671** Seminar in Human Development: Positive Behavior Support for Young Children with Challenging Behavior (3)
- **CSP 623** Ecobehavioral Assessment – Intervention (3)
- **SPED 676** Advanced Applied Behavior Analysis (3)

**Experience Area – Field Experience/Practicum (6 units):**

- **CFD 697** Advanced Field Experiences Cr/NC (3 units each semester: 500 hours of supervised practicum to include 50 hours of group supervision, 30 hours of one-on-one, and 6 to 10 hours of on-site coaching).

For further information, contact the program adviser, Dr. Shulamit N. Ritblatt.

**Courses Acceptable on Master's Degree Program in Child Development (CFD)**

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

**UPPER DIVISION COURSES**

- **CFD 538. Divorce and Remarriage (3)**
  Prerequisites: Child and Family Development 335 and Sociology 101. **Proof of completion of prerequisites required:** Copy of transcript.

  Integration of family theories and research findings. Emphasis on adjustment to divorce and remarriage throughout life cycles, across cultures, social classes, and ethnicities.

- **CFD 537. Child Abuse and Family Violence (3)**
  Prerequisites: Child and Family Development 375A, 375B, 375C, and two units from Child and Family Development 378A, 378B, 378C, 378D. **Proof of completion of prerequisites required:** Copy of transcript.

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

- **CFD 560. Theories in Socio-Emotional Development (3)**
  Prerequisites: Child and Family Development 375A, 375B, 375C, 475, and two units from Child and Family Development 378A, 378B, 378C, 378D. **Proof of completion of prerequisites required:** Copy of transcript.

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

- **CFD 565. Best Practices of Care for Infants/Toddlers (3)**
  Prerequisites: Consent of instructor and completion of all lower division preparation for the major courses with a grade of C (2.0) or better. **Proof of completion of prerequisites required:** Copy of transcript.

  Best practices of care for infants and toddlers to include respectful, attentive physical care, its basic principles and the practical components of best practices of care for young children. Design environments of care that ensure safety and optimum growth and development in collaboration with families via meaningful connections between child care and child's home and culture.

- **CFD 575. Public Policy and Professional Ethics in Child and Family Development (3)**
  Prerequisites: Child and Family Development 375A, 375B, 375C, two units from Child and Family Development 378A, 378B, 378C, 378D, and Child and Family Development 536 or 537 or 590. **Proof of completion of prerequisites required:** Copy of transcript.

  Ethical guidelines and other standards related to child and family development. Informed advocates for equitable educational practices and policies.

- **CFD 577. Professionalism and Advanced Administration of Child Development Programs (3)**
  Prerequisite: Child and Family Development 477. **Proof of completion of prerequisite required:** Copy of transcript.

  Problem analysis and development of successful organizational strategies for child development program delivery. Leadership, effective communication, social and ethical issues from a multicultural perspective.

- **CFD 578. Conflict Resolution Across the Life Span (4)**
  Three lectures and three hours of laboratory.

  Prerequisites: Child and Family Development 335, 370, 375A, 375B, 375C, 475, two units from Child and Family Development 378A, 378B, 378C, 378D, and Child and Family Development 537 and 560 with an overall grade of C (2.0) or better. **Proof of completion of prerequisites required:** Copy of transcript.

  Theories of conflict development and resolution across lifespan. Parenting styles, discipline, behavior and class management, and conflict resolution techniques used in relationships. Directed experiences using conflict resolution techniques in various settings.

- **CFD 590. Children with Special Needs (4)**
  Three lectures and three hours of laboratory.

  Prerequisites: Child and Family Development 270 or Psychology 230, Child and Family Development 353A, 353B, 353C, and completion of 12 upper division units in child and family development with a grade of C (2.0) or better for majors; consent of instructor for graduate students. **Proof of completion of prerequisites required:** Copy of transcript.

  Adaptive and maladaptive processes throughout life span with emphasis on etiology, development, and adjustment of emotional, psychological, and physical disorders. Directed experience with special needs individuals and their families with focus on inclusion.

- **CFD 596. Advanced Studies in Child and Family Development (1-6)**
  Prerequisite: Nine upper division units in child and family development.

  Advanced study of selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of nine units of 596. No more than six units of 596 may be applied to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

- **CFD 597. Field Experience in Child and Family Development Programs (3) Cr/NC**
  Prerequisites: Completion of five child and family development 500-level courses with a grade of C (2.0) or better in each course. **Proof of completion of prerequisites required:** Copy of transcript.

  Work experience in child and family development. Application of theoretical and evidence-base information with reflective supervision from faculty and field supervisor. Development of professional identity and career goals.

- **CFD 598. Reflective Learning Portfolio (1) Cr/NC**
  Two hours of activity.

  Prerequisite: Senior standing. Limited to child development majors. Major code: 08231.

  Capstone course to mentor child development majors to integrate knowledge acquired throughout child and family development program. Create portfolio and reflective essay.
GRADUATE COURSES

CFD 634. Seminar in Family Processes (3)
Prerequisite: Child and Family Development 335.
Analysis of selected research in family structure, development, and crisis.

CFD 660. Seminar in Current Issues and Trends in Child Development (1) Cr/NC
Prerequisite: Consent of graduate adviser.
Current issues and trends in research and policy making in child development field; career development and opportunities. Maximum credit four units.

CFD 670. Seminar in Child Development Theories-Intervention and Prevention (3)
Prerequisite: Six upper division units in child and family development.
Advanced child development theories. Emphasis on intervention and prevention models, theories, research, and applications.

CFD 671. Seminar in Human Development (3)
Prerequisite: Six upper division units in child and family development.
Analysis of selected research in human development. May be repeated with new content for maximum credit six units.

CFD 697. Advanced Field Experiences (3) Cr/NC
Prerequisite: Child and Family Development 670 or 671.
Advanced application of human developmental theories and techniques in various community settings. Maximum credit six units.

CFD 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
Louis M. Rea, Ph.D., Professor of Public Affairs, Interim Director of School (M.P.A. Graduate Coordinator)
Roger W. Caves, Ph.D., Professor of Public Affairs
Lawrence A. Herzog, Ph.D., Professor of Public Affairs
(Graduate Coordinator)
Sherry Ryan, Ph.D., Associate Professor of Public Affairs
Maurizio Antonietti, Ph.D., Assistant Professor of Public Affairs

General Information

The School of Public Affairs offers graduate study leading to the Master of City Planning degree. Research facilities provided include the Institute of Public and Urban Affairs and the Public Administration Center.

The San Diego metropolitan community affords significant internship opportunities for the graduate student in federal, state, and local government agencies.

Master of City Planning Degree

Admission to Graduate Study

All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. The student must possess a bachelor’s or higher degree in sociology, geography, political science, economics, architecture, or landscape architecture, or any fields related to planning (students with degrees other than those listed may be allowed to enter the program under appropriate conditions). In the event that deficiencies occur in a student’s background and training, the graduate committee will examine the student’s past record and recommend a program to make up the deficiencies.

Students seeking admission to the graduate program in urban planning which leads to the Master of City Planning degree should address their inquiries to the director of the program. As there are specific requirements for the program it is not sufficient merely to file the general university admission forms. Students are admitted to the program in the fall and spring semesters of each year.

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

Students applying for admission should electronically submit the university application available at [http://www.csumentor.edu](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 degree.
- 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) English language score, if medium of instruction was in a language other than English ([http://www.ets.org](http://www.ets.org), SDSU institution code 4682);

School of Public Affairs

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

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

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

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy, as described in Part Four of this bulletin and be recommended by faculty. In order to be recommended for advancement, a student must have (1) achieved a grade point average of 3.0 in 15 units of city planning courses, or (2) passed satisfactorily a written examination in areas of deficiency. The examination will be offered at the end of the spring semester for all students who have completed 12 or more units of study toward the master's degree.

Specific Requirements for the Master of City Planning Degree (Major Code: 02061)

In addition to meeting the requirements for classified graduate standing for the purpose of pursuing the Master of City Planning degree, the student must complete an approved program of study consisting of at least 48 units of approved 500-, 600-, and 700-numbered courses, with no more than nine units of 500-level courses, to include:

1. C P 625 Quantitative Techniques in Urban Planning (3)
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)

12. Twelve units of 600- and 700-numbered courses in planning elective courses, readings and research.

13. C P 796 Internship in Urban Planning (3-6) Cr/NC
14. P A 604 Methods of Analysis in Public and Urban Affairs (3)

Other electives to complete program selected with the approval of adviser.

6. Students in Plan B are required to pass comprehensive written examinations in general city planning and in three areas of study. Students who have approval of the graduate adviser to pursue Plan A must include on their programs City Planning 799A, Thesis. At least 39 units must be completed in residence at San Diego State University, and at least 24 units of program courses shall be enrolled in and completed after advancement to candidacy.

Not more than a total of nine units in courses 797 and 798 will be accepted for credit toward the degree.
**Courses Acceptable on Master's Degree Program in City Planning (C P)**

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

**GRADUATE COURSES**

C P 625. Quantitative Techniques in Urban Planning (3)
Prerequisite: Public Administration 604.
Advanced techniques for analyzing problems in city planning; emphasis on computer applications.

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

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

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

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

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

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

C P 675. Seminar in Environmental Policy and Planning (3)
Theoretical elements of environmental policy, sustainability; application to urban planning, Green site planning, urban design, and transportation policy.

C P 690. Seminar in Land Use Planning Principles and Techniques (3)
Two lectures and three hours of laboratory.
Prerequisite: City Planning 660.
Land-use and physical planning principles and techniques at the regional, community, specific and subdivision planning levels.

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

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

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

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

C P 736. Internship in Urban Planning (3-6) Cr/NC
Students will be assigned to various government agencies and will work under joint supervision of agency heads and the course instructor. Participation in staff and internship conferences. Maximum credit six units.

C P 797. Research in Urban Planning (3) Cr/NC/RP
Prerequisite recommended: Consent of director of city planning program. Research in one of the areas of urban planning. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

C P 798. Special Study (1-3) Cr/NC/RP
Prerequisite recommended: Consent of staff. To be arranged with director of city planning and instructor. Individual study. Maximum credit six units applicable to a master’s degree.

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

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

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

For additional courses applicable to the Master of City Planning degree see:
Public Administration 525. The U.S. City Planning Process

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**Civil Construction and Environmental Engineering**

Refer to “Engineering” in this section of the bulletin.
Communication
In the College of Professional Studies and Fine Arts

OFFICE: Communication 237
TELEPHONE: 619-594-0716 / FAX: 619-594-0704
E-MAIL: socdesk@mail.sdsu.edu
http://communication.sdsu.edu

Faculty
William B. Snavely, Ph.D., Professor of Communication,
Director of School
Wayne A. Beach, Ph.D., Professor of Communication
George N. Dionisopoulos, Ph.D., Professor of Communication
Patricia J. Geist-Martin, Ph.D., Professor of Communication
Susan A. Hellweg, Ph.D., Professor of Communication, Emerita
Brian H. Spitzberg, Ph.D., Professor of Communication
Kurt J. Lindemann, Ph.D., Associate Professor of Communication
Valerie R. Renegar, Ph.D., Associate Professor of Communication
(Graduate Adviser)
Carmen M. Lee, Ph.D., Assistant Professor of Communication

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

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

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

- Training in teaching the basic oral communication course and helping first-year undergraduates to improve their communication skills;
- A monthly stipend that helps to offset the expenses of graduate school;
- Preparation for a teaching career.

Instructions for applying for a Graduate Teaching Associate position are available at http://communication.sdsu.edu/pages/applying.html.

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

Admission to Graduate Study

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

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

1. Undergraduate major or minor in communication, speech communication, or a related discipline. Those lacking adequate undergraduate preparation may be admitted conditionally to the program and are required to take one or more proficiency courses identified, as determined by the graduate adviser. Proficiency courses do not count toward the 30 units of a student's graduate program.

2. Minimum grade point average of 2.85 (when A equals 4.0) in the last 60 semester (90 quarter) units attempted (this calculation may not include lower division courses taken after award of a baccalaureate degree).

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

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

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

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

(2) GRE scores (http://www.ets.org, SDSU institution code 4682), All applicants must post a Graduate Record Examination (GRE) verbal score of 450 or higher; a GRE quantitative score of 450 or higher; a combined GRE verbal and quantitative score of 950 or higher; and a GRE writing assessment (GRE-W) of level 4 or higher;

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

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

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

Cover Letter
- Indicate that you applied online, paid your fee, and submitted official transcripts and scores to Graduate Admissions;
- Indicate if you are applying for a Graduate Teaching Associate (GTA) position and describe the details of any teaching experience. If you did major in communication as an undergraduate, indicate any communication coursework that might prepare you for teaching.
Application Support Materials
(1) Letters of Recommendation
Three letters of recommendation from academic or professional references that speak to your ability to succeed in graduate studies. We prefer that at least two of the letters be written by professors who can speak to your academic background and capabilities.
(2) Personal Statement
A personal statement of purpose that (a) describes your interest in communication, (b) describes your undergraduate and/or professional preparation for graduate studies in the communication program, (c) articulates your personal and/or career objectives that graduate studies in communication will help you pursue, and (d) optional: describes your interest in a Graduate Teaching Associate position, addressing how this desire relates to your interest in communication, your past academic and professional experience, and your career objectives.
(3) Photocopies of Transcripts and Scores
It is essential to send photocopies of your transcripts and GRE scores (and English language scores, if applicable) to the School of Communication. Eventually, we will receive the official transcripts and scores from Graduate Admissions; however, we may be in a position to review your materials and make admission and GTA decisions before the materials arrive from the Graduate Admissions office.
(4) A resume or vita
(5) OPTIONAL: Writing sample that you believe well represents your writing capabilities (e.g., a paper written for an undergraduate course).

Specific Requirements for the Master of Arts Degree
(Major Code: 06011) (SIMS Code: 661129)
In addition to meeting the requirements for the Master of Arts degree as described in Part Four of this bulletin, the student must complete a minimum of 30 units in courses acceptable in master’s degree programs. At least 18 units of the total program must be in courses numbered 600-799. Approval of the graduate adviser is required for all courses numbered 500-599. With the approval of the graduate adviser, students may take up to six units of graduate coursework in departments other than the School of Communication. Students may not repeat any course in their program of study without consent of the graduate adviser and instructor.
The M.A. in communication provides advanced study of language, interaction, and communication in relational, organizational, cultural, medical, and societal contexts. Individuals in this specialization explore communication as an interactive process across diverse social relationships, activities and contexts. Please see the School of Communication Web site for the most current information:
http://communication.sdsu.edu

Students may elect Plan A (Thesis) by completing Communication 799A (3 units) or Plan B (Comprehensive Examination) by completing three additional units of 600-700 level coursework in the School of Communication and pass the Comprehensive Examination in Communication.
Graduate Courses. The remaining 27 units of the program must include Communication 601 with a grade of B or better; six units selected from Communication 610, 620, 640, 660; 12 units selected from Communication 610, 620, 640, 660, 665, 696, 705, 706, 707, 715, 721, 735, 740, 745, 750, 751, 752, 755, 771, 783, 786, 792, 798; and six units selected with the approval of the graduate adviser. No more than six units may be taken as special study (Communication 798).

Courses Acceptable on Master's Degree Programs in Communication (COMM)
Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

UPPER DIVISION COURSES
NOTE: Communication courses numbered 500 to 599 are not acceptable for the Master of Arts degree in Communication.

COMM 508. Media Literacy (3)
Prerequisites: Communication 300 and 350. Admission to a major or minor in the School of Communication.
Role played by video texts in shaping culture including information distribution, entertainment, and socio-cultural influence exercised by television. Emphasis on audience/medium relationship and to developing critical skills.

COMM 555. Conflict Management Communication (3)
Prerequisites: Communication 300 and 350. Admission to a major or minor in the School of Communication.
Approaches to conflict communication in international, societal, group, institutional, and interpersonal contexts.

COMM 596. Selected Topics (1-4)
Prerequisite: Senior standing or above.
Specialized study in selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units 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. Assumptions and practices of conversation analysis. Repeated examinations of diverse recordings and transcriptions as resources for analyzing distinctive, methodological, and ordered nature of communication contexts.

COMM 696. Special Topics (3)
Prerequisite: Credit or concurrent registration in Communication 601. Intensive study in specific areas of communication. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

COMM 705. Seminar: Performance Studies (3)
Prerequisite: Credit or concurrent registration in Communication 601. Critical examination of embodiment of written and spoken human communication in variety of social and cultural contexts and practices to include ritual, play, narrative, storytelling, folklore, and popular media.

COMM 706. Seminar: Organizational Communication (3)
Prerequisite: Credit or concurrent registration in Communication 601. Functions, forms, and consequences of communicating in organizations in a changing work world. Topics such as culture groups, networks, leadership, conflict, and decision making.

COMM 707. Seminar: Instructional Communication (3)
Prerequisite: Credit or concurrent registration in Communication 601. Communication relationships in instructional setting, teacher verbal and non verbal immediacy, student communication apprehension, as a function of instructional modalities, and cultural diversity issues.

COMM 715. Seminar: Nonverbal Communication (3)
Prerequisite: Credit or concurrent registration in Communication 601. Nonverbal human behavior, including body movements, gesture, gaze, touch, and integration of vocal and nonvocal activities in human interaction.

COMM 721. Seminar: Health Communication (3)
Prerequisite: Credit or concurrent registration in Communication 601. Personal, interactional, cultural, and political dimensions of communication about health and illness. Assumptions, practices, and structures of discourse across boundaries of family, social, and institutional contexts. May be repeated with new content. Maximum credit six units.

COMM 735. Seminar: Relational Communication (3)
Prerequisite: Credit or concurrent registration in Communication 601. Contemporary theory and research addressing interpersonal verbal and nonverbal communication in intimate and non-intimate relationships.

COMM 740. Seminar: Rhetorical Theory (3)
Prerequisite: Credit or concurrent registration in Communication 601. Different perspectives on rhetoric and human communication explored to better understand historical and contemporary theories of rhetoric.

COMM 745. Seminar: Rhetoric of Women’s Rights (3)
Prerequisite: Credit or concurrent registration in Communication 601. Rhetoric of women’s suffrage movement, feminist rhetoric from 1960s and 1970s and contemporary feminist rhetoric.

COMM 750. Seminar: Selected Topics: Communication Contexts (3)
Prerequisite: Credit or concurrent registration in Communication 601. Intensive study in specific contextual forms of communication. See Class Schedule for specific content. May be repeated with new content. Maximum credit nine units applicable to a master’s degree in communication.

COMM 751. Seminar: Gender and Communication (3)
Prerequisite: Credit or concurrent registration in Communication 601. Socially constructed gender through communication. Contexts include interpersonal relationships, public discourse, and organizations.

COMM 752. Seminar: Dark Side of Communication (3)
Prerequisite: Credit or concurrent registration in Communication 601. Communication considered destructive or unethical yet functional, productive or productive and ethical yet dysfunctional, destructive or evil, or ideologically ignored by current inquiry; including jealousy, infidelity, coercion, deception, aggression, and manipulation.

COMM 755. Seminar: Public Address (3)
Prerequisite: Credit or concurrent registration in Communication 601. Case studies of rhetorical events which illustrate rhetorical theory. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

COMM 771. Seminar: Intercultural Communication (3)
Prerequisite: Credit or concurrent registration in Communication 601. Analysis of cultural influences on human communication acts. Emphasis on cultural values, perception, social organizations, language, and nonverbal codes.

COMM 783. Seminar: Medical Interaction (3)
Prerequisite: Credit or concurrent registration in Communication 601. Communication in medical interviewing using conversational analysis of doctor-patient interactions.

COMM 786. Seminar: Communication and Leadership (3)
Prerequisite: Credit or concurrent registration in Communication 601. Theory and research on role and function of communication behavior in exercise of leadership in contemporary organizations and public life.

COMM 792. Seminar: Persuasion (3)
Prerequisite: Credit or concurrent registration in Communication 601. Contemporary theories and models of persuasion, methods of assessing persuasive effect, and analysis of research literature.

COMM 798. Special Study (1-3) Cr/NC/RP
Contract required. Arranged with graduate coordinator in area of study. Individual study. Maximum credit six units applicable to a master’s degree.

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

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

In the College of Sciences

OFFICE: Geology/Mathematics/Computer Science 206H
TELEPHONE: 619-594-3430 / FAX: 619-594-2459
http://www.csrc.sdsu.edu

Associated Faculty for Computational Science
José E. Castillo, Ph.D., Professor of Mathematics, Program Director
Ricardo Carretero, Ph.D., Professor of Mathematics
Subrata Bhattacharjee, Ph.D., Professor of Mechanical Engineering
Andrew L. Cooksy, Ph.D., Professor of Chemistry and Biochemistry
Steven M. Day, Ph.D., Professor of Geological Sciences,
  The Rollin and Caroline Eckis Chair in Seismology
Juanjuan Fan, Ph.D., Professor of Statistics
Terrence G. Frey, Ph.D., Professor of Biology
Calvin W. Johnson, Ph.D., Professor of Physics
Richard A. Levine, Ph.D., Professor of Statistics
Joseph M. Mahaffy, Ph.D., Professor of Mathematics
Eugene A. Olevsky, Ph.D., Distinguished Professor of Mechanical Engineering
Kim Bak Olsen, Ph.D., Professor of Geological Sciences
Antonio Palacios, Ph.D., Professor of Mathematics
Paul J. Paolini, Jr., Ph.D., Professor of Biology, Emeritus
Patrick J. Papin, Ph.D., Professor of Physics and Associate Dean for
  Academic Affairs, College of Sciences
Forest Rohwer, Ph.D., Professor of Biology
Peter Salamon, Ph.D., Professor of Mathematics
Eric L. Sandquist, Ph.D., Professor of Astronomy
Anca Mara Segall, Ph.D., Professor of Chemistry and Biochemistry
Fridolin Weber, Ph.D., Professor of Physics
Arlette R.C. Baijn, Ph.D., Associate Professor of Physics
Peter Blomgren, Ph.D., Associate Professor of Mathematics
Michael W. Bromley, Ph.D., Associate Professor of Physics
Scott T. Kelley, Ph.D., Associate Professor of Biology
Sunil Kumar, Ph.D., Associate Professor of Electrical and Computer Engineering
John J. Love, Ph.D., Associate Professor of Chemistry and Biochemistry
Michael O’Sullivan, Ph.D., Associate Professor of Mathematics
David P. Pullman, Ph.D., Associate Professor of Chemistry and Biochemistry
Marie A. Roch, Ph.D., Associate Professor of Computer Science
Satchi Venkataraman, Ph.D., Associate Professor of Aerospace Engineering and Engineering Mechanics
Robert W. Zeller, Ph.D., Associate Professor of Biology
Barbara Ann Bailey, Ph.D., Assistant Professor of Statistics
Kristin A. Duncan, Ph.D., Assistant Professor of Statistics
Robert A. Edwards, Ph.D., Assistant Professor of Computer Science

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

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

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

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

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

Master of Science Degree in Computational Science
The following materials 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 persons in a position to judge academic ability;
(2) Personal statement of motivating interest for the program and briefly describe research interests and educational goals.

Ph.D. Degree in Computational Science
The following materials should be mailed or delivered to:
Computational Science Research Center
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1245

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

General Information
The computational science program offers a Master of Science degree. It is offered in collaboration with the Departments of Biology, Chemistry and Biochemistry, Computer Science, Geological Sciences, Mathematics and Statistics, and Physics, in the College of Sciences.

Graduates of this program will have a solid foundation in a field of science and the additional training and experience required of computational science professionals. Fundamental science, in one of the specializations, dominates the program. This is supplemented with additional courses in computational science. Real scientific problem-solving is emphasized, through a thesis that could be done in conjunction with a carefully managed extramural research program. A significant proportion of the students in this program will be employed in positions related to their area of studies, thereby providing opportunities for extramural support. Graduates will be prepared for positions in scientific research, scientific programming, and software engineering.

Associateships
Graduate teaching associateships and graduate nonteaching associateships may be available from the individual departments. See the appropriate department of this bulletin for more information.

Admission to the Degree Curriculum
All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. If the undergraduate preparation of the students in the desired specialization is deficient, they will be required to take courses for the removal of the deficiency. These courses, taken by students as a classified graduate student, are in addition to the minimum 30 units required for the master’s degree. A complete student program must be approved by the computational science program director. The requirements for entering this program consist of one year of computer programming (e.g., C or Fortran), competence in linear algebra and calculus, and a background equivalent to a bachelor's degree in the area of interest.

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy as described in Part Four of this bulletin.

Specific Requirements for the Master of Science Degree
(Major Code: 07992) (SIMS Code: 773001)
In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master’s degree as described in Part Four of this bulletin. The student must also complete a graduate program of 30 units, of which at least 15 units must be in 600- and 700-level courses excluding 797, 798, and 799A to include:

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 605/606 Scientific Computing (3)
   - COMP 607 Computational Database Fundamentals (3)
   - COMP 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 bachelor's degree with a strong mathematical background. The student must complete a graduate program of 40 units to include the following:

Required core courses (34 units):

Core Courses
- COMP 526 Computational Methods for Scientists (3)
- COMP 536 Computational Modeling for Scientists (3)
- COMP 589 Computational Imaging (3)
- COMP 601 Seminar: Business Skills for the Information Age (3)
- COMP 602 Organizational Development (2)
- COMP 603 Engineering Economics for Scientists (2)
- COMP 604 Computational and Applied Statistics (3)
- COMP 606 Designing Scientific and Industrial Experiments (3)
- COMP 607 Computational Database Fundamentals (3)
- COMP 626 Advanced Numerical Analysis (3)
- COMP 670 Seminar: Problems in Computational Science (3)
- COMP 671 Problem Solving Techniques (3)

Project (6 units):
- COMP 797 Research (3) Cr/NC/RP
- COMP 798 Special Study (3) and comprehensive examination

Substitution of core courses is permitted based on disciplines related to student's specialization with consent of director.

Section II.
Doctoral Program
http://www.cs.ucr.edu/phd.php

General Information
San Diego State University and Claremont Graduate University, offer jointly a doctoral program in computational science and a concentration in statistics. The cooperating faculties are from the Colleges of Engineering and Sciences at San Diego State University and participating units from Claremont Graduate University.

Admission to the Degree Curriculum
In order to be considered for admission into the program, applicants must fulfill the general requirements for admission with graduate standing to both institutions. Applicants must meet special requirements of this program which include (a) a baccalaureate degree from an accredited institution in a scientific discipline or engineering. Applications from outstanding candidates with degrees in other areas may be accepted conditionally; normally, these students will be expected to take during their first year of enrollment the necessary coursework to eliminate deficiencies; (b) an undergraduate minimum grade point average of 3.0 and minimum 3.50 in any previous graduate coursework; (c) suitable scores on both the quantitative and verbal sections of the Graduate Record Examination.
Faculty Advisers and Doctoral Committee: Upon admission to the program, the student will be assigned a faculty mentor from either institution. After completing the first year of study and receiving a progress evaluation, the student will select a doctoral adviser. The doctoral adviser will aid in the development of a suitable course of study for the student, administer the student's qualifying examination, monitor progress of student research and administer the defense of the doctoral dissertation.

Specific Requirements for the Doctor of Philosophy Degree

(Major Code: 07992) (SIMS Code: 773002)

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

Minimum 24 units of graduate level coursework at SDSU (computational science program);
Minimum 24 units of graduate level coursework at CGU (graduate mathematics program);
Minimum 24 units of research, practicum, dissertation, and graduate seminar at either institution.

An additional 24 to 48 units of research, practicum, dissertation, and graduate seminar (COMP 800) may be taken at either institution. A student entering the program with a Bachelor of Science degree will satisfy the initial 24 unit requirement by completing a Master of Science degree in computational science at SDSU, then take 24 units of coursework at CGU. Students with an advanced degree other than computational science will complete appropriate courses and a research project to obtain the equivalent of an M.S. degree in computational science.

Claremont Graduate University Courses: Students are required to take 24 units at Claremont Graduate University. There is a core course requirement that must be satisfied with students selecting at least one course from each 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, dePillis, Liebesking-Hadas, Raval, Spanier, Wild, Williamson

Concentration in Statistics

(Major Code: 07992) (SIMS Code: 773003)

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

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

SDSU courses:
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.
Computational Science

Minimum 24 units of research, practicum, dissertation, and graduate seminar at either institution:  
Research units at SDSU: COMP 800, 894, 897, 898, 899.  
Research units at CGU: MATH 495, 498, 499.

A student with a Bachelor of Science degree will satisfy the initial 24 units of SDSU course requirements by completing a Master of Science degree in statistics at SDSU, with program of study to include Statistics 700, 701, and 702, then taking 24 units of coursework at CGU.

Faculty  
The following faculty members of the cooperating institutions are available for direction of research in the statistics concentration.  
San Diego State University  
Program Directors: José E. Castillo and Richard A. Levine  
Doctoral advisers: Bailey, Chen, Duncan, Fan, Levine, Lin, Lui

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

Associateships  
Graduate teaching associateships in statistics and biostatistics are available and are awarded on a competitive basis by the Department of Mathematics and Statistics. Application forms and additional information may be secured from the office of the Department of Mathematics and Statistics.

Advanced Certificate in Professional Computational Science  
(Offered through the College of Extended Studies)  
(Major Code: 90046) (SIMS Code: 773005)  
The Advanced Certificate in Professional Computational Science is designed for private and public industry professionals as well as graduate students who wish to learn professional and technical computational skills in their fields to include tools available for scientific application development (particularly those targeted as parallel and distributed systems), scientific visualization and database query applications, simulation and modeling packages, computational templates such as Matlab and Maple, and the choice of appropriate hardware resources for different classes of computational problems. Credit earned through the Advanced Certificate in Professional Computational Science can be applied toward the units required to obtain the Master of Science degree in Computational Science with a Concentration in Professional Applications.

The advanced certificate requires 12 units to include Computational Science 526, 589, 601, 604 with a grade of B or better in each course. Other courses may not be substituted.

Courses Acceptable on Master's and Doctoral Degree Programs in Computational Science (COMP)  
Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

UPPER DIVISION COURSES

COMP 521. Introduction to Computational Science (3)  
Prerequisite: Mathematics 151.

Matrices and linear equations, solving ordinary differential equations (ODEs), vector spaces, closed form solutions, qualitative theory, Eigenvalues, linear maps, linear differential equations, other techniques, nonlinear systems, higher dimensional systems.

COMP 526. Computational Methods for Scientists (3)  
Prerequisites: Mathematics 252 and 254.

Translating mathematical problem descriptions to computer programs. Introduction to Unix system.

COMP 536. Computational Modeling for Scientists (3)  
Prerequisite: Mathematics 151.

Models, computational tools, errors, system dynamics, growth, stability, multicompartment models, Euler’s, Runge-Kutta methods, system dynamics, infectious disease, enzyme kinetics, environmental cycles, cardiovascular system, metabolism, global warming, empirical models, HIV, population distributions, diffusion, HPC.

COMP 589. Computational Imaging (3)  
Prerequisites: Mathematics 150 and 254.

Mathematical techniques used for image processing and analysis. Emphasis on variational techniques which lead to PDE based image processing algorithms, most are known as diffusion filters, and interface propagation techniques for which emphasis will be implicit representation (level-set methods), Representation and properties of curves and surfaces, statistical (PCA/ICA), and multi-resolution image analysis techniques.

COMP 596. Advanced Topics in Computational Science (1-4)  
Prerequisite: Consent of instructor.

Selected topics in computational science. May be repeated with the approval of the instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

COMP 600. Seminar (1-3)  
Prerequisite: Consent of instructor.

An intensive study in advanced computational science. May be repeated with new content. Topic to be announced in the Class Schedule. Maximum credit six units applicable to a master’s degree.

COMP 601. Seminar: Business Skills for the Information Age (3)  
Prerequisite: Graduate standing.

Human and infrastructure management issues specific to science and technology workplaces.

COMP 602. Organizational Development (2)  
Prerequisite: Graduate standing.

Contemporary organizational and leadership theory and practice through personal reflection, team assessment and feedback, and case analysis. Nature of change, forces for change, and impact of change in organizations and individuals. Organizational processes, structures and cultures, and effect on organization’s performance.

COMP 603. Engineering Economics for Scientists (2)  
Prerequisites: MS Excel and basic mathematics.

Systematic economic analysis of engineering problems.

COMP 604. Computational and Applied Statistics (3)  
Prerequisite: Mathematics 254.

Statistical decision making and methods relevant to scientific inquiries.

COMP 605. Scientific Computing (3)  
(Same course as Computer Science 605)  
Prerequisites: Graduate standing and knowledge of the C programming language or FORTRAN or Computational Science 526.

Parallel programming using message passing to include high performance computing and MPI language extensions. (Formerly numbered Computer Science 505.)

COMP 606. Designing Scientific and Industrial Experiments (3)  
Prerequisite: Computational Science 604.

Design selection, data collection, and evaluation using multiple regression to analyze experimental data.

COMP 607. Computational Database Fundamentals (3)  
Prerequisite: Graduate standing.

Data-processing techniques, software, database design, implementation, and manipulation.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 626</td>
<td>Applied Mathematics for Computational Scientists</td>
<td>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.</td>
</tr>
<tr>
<td>COMP 670</td>
<td>Seminar: Problems in Computational Science</td>
<td>Prerequisite: Graduate standing. Applications of computational science in solving problems using a variety of methods. Problems selected from biology, chemistry, physics, and other fields.</td>
</tr>
<tr>
<td>COMP 671</td>
<td>Problem Solving Techniques</td>
<td>Prerequisite: Graduate standing. Data abstraction and problem solving skills.</td>
</tr>
<tr>
<td>COMP 689</td>
<td>Imaging Science</td>
<td>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.</td>
</tr>
<tr>
<td>COMP 696</td>
<td>Selected Topics in Computational Science</td>
<td>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.</td>
</tr>
<tr>
<td>COMP 797</td>
<td>Research (1-3) Cr/NC/RP</td>
<td>Prerequisite: Six units of graduate level computational science courses. Research in computational science. Maximum credit six units applicable to a master's degree.</td>
</tr>
<tr>
<td>COMP 798</td>
<td>Special Study (1-3) Cr/NC/RP</td>
<td>Prerequisite: Consent of staff; to be arranged with program director and instructor. Individual study. Maximum credit six units applicable to a master's degree.</td>
</tr>
<tr>
<td>COMP 799A</td>
<td>Thesis or Project (3) Cr/NC/RP</td>
<td>Prerequisites: An officially appointed thesis committee and advancement to candidacy. Preparation of a project or thesis for the master's degree.</td>
</tr>
<tr>
<td>COMP 799B</td>
<td>Thesis or Project Extension (0) Cr/NC</td>
<td>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.</td>
</tr>
<tr>
<td>COMP 799C</td>
<td>Comprehensive Examination Extension (0) Cr/NC</td>
<td>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.</td>
</tr>
</tbody>
</table>

**DOCTORAL COURSES**

COMP 800, Seminar (3)
Prerequisite: Admission to the doctoral program. Topics in different areas of computational science.

COMP 810, Colloquium in Computational Science (1) Cr/NC/RP
Prerequisite: Admission to the doctoral program. Discussions on advances in computational science research. Course to be taken every semester.

COMP 894, Supervised Research, Qualifying Examination, and Dissertation Proposal (3-9) Cr/NC/RP
Prerequisites: Admission to the doctoral program and consent of instructor. Research and preparation for qualifying examination. (Formerly numbered Computational Science 890 and 895.)

COMP 896, Practicum (1-9) Cr/NC/RP
Prerequisite: Admission to the doctoral program. Independent investigation in general area of field of dissertation. Conducted in industry or national laboratory under faculty supervision. Maximum credit 36 units.

COMP 897, Doctoral Research (1-9) Cr/NC/RP
Prerequisite: Admission to the doctoral program. Independent investigation in general field of dissertation. Maximum credit 36 units.

COMP 898, Doctoral Special Study (1-3) Cr/NC/RP
Prerequisite: Advancement to candidacy. Individual study leading to study and research required for doctoral dissertation.

COMP 899, Doctoral Dissertation (1-15) Cr/NC/RP
Prerequisites: An officially constituted dissertation committee and advancement to candidacy. Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the student plans to graduate.
Computer Science
In the College of Sciences

OFFICE: Geology/Mathematics/Computer Science 413
TELEPHONE: 619-594-6191
http://www.cs.sdsu.edu

Faculty
Leland L. Beck, Ph.D., Professor of Computer Science,
Chair of Department
John L. Carroll, Ph.D., Professor of Computer Science
John D. Donald, Ph.D., Professor of Computer Science, Emeritus
Kris W. Stewart, Ph.D., Professor of Computer Science
Roman W. Swinarski, Ph.D., Professor of Computer Science
Mahmoud Tarokh, Ph.D., Professor of Computer Science
Marko I. Vuskovic, Ph.D., Professor of Computer Science
Carl F. Eckberg, Ph.D., Associate Professor of Computer Science
Marie A. Roch, Ph.D., Associate Professor of Computer Science
Faramarz Valafar, Ph.D., Associate Professor of Computer Science
Roger E. Whitney, Ph.D., Associate Professor of Computer Science
Tao Xie, Ph.D., Associate Professor of Computer Science
Robert A. Edwards, Ph.D., Assistant Professor of Computer Science
William A. Root, M.S., Staff Scientist

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

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy as described in Part Four of this bulletin.

Specific Requirements for the Master of Science Degree in Computer Science
(Major Code: 07011) (SIMS Code: 773801)
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the student must meet the following departmental requirements:

1. Complete a minimum of 30 units of 500-, 600-, and 700-level courses as follows:
   a. At least 15 units from Computer Science 600- and 700-level courses selected with the approval of the adviser. One to three 600-level computer science courses listed below in the ALC area of study may replace one 600- and 700-level course.
   b. Students select two areas of study from the areas listed below, and 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.
   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


(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, 653, 656, 657, 682.


Advanced Web and Mobile Applications Development Certificate

(Major Code: 90054) (SIMS Code: 773806)

(Offered through the College of Extended Studies)

The advanced certificate in Web and Mobile Applications Development provides students with the specialized knowledge that is important in the development of Web and mobile computer applications. Students will study and gain experience with the languages and frameworks that are most commonly used in developing these applications, with the design of user interfaces and software systems, and with associated topics such as networking, hosting infrastructure, and security. They will also learn the fundamental principles on which these topics are based, so that they will be prepared for the new technologies that are constantly being developed.

The admission requirement is a bachelor's degree in computer science or a closely related field. Individuals with an equivalent knowledge of the background materials through work or self-study may be accepted into this program at the discretion of the program director.

The certificate requires completion of at least four courses (12 units) with the approval of the program adviser selected from Computer Science 545, 546, 547, 645, 646, 648. At least two of the four courses must be at the 600-level.

For more information, contact the Department of Computer Science at http://www.cs.sdsu.edu.

Courses Acceptable on Master's Degree Program in Computer Science (CS)

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

UPPER DIVISION COURSES

CS 501. Computational Software (3)

Prerequisite: Computer Science 310.

Design and implementation of software for computational science. Makefiles in UNIX environment, efficient Fortran and C 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 file, indexed compressed files, relational databases, and object oriented databases, and their associated query technologies; e.g. file formats, input/output libraries, 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 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 MapObjects with Visual Basic, MapObjects with Java. Considerable programming effort required, especially in Graphical User Interface development.

CS 540. Software Internationalization (3)
Prerequisite: Computer Science 310.
Principles, techniques, and resources for design and implementation of software localizable to multiple languages and/or cultures, including detailed examination of internationalization features provided by one or more widely used modern programming languages.

CS 541. Online Documentation and Help Systems (3)
Prerequisite: Computer Science 310.
Design, implementation, and maintenance of online documentation and help systems, including authoring principles and standards; theory and practice of single-source content management; survey of available development tools and resources; internationalization; and project management.

CS 542. XML for Multilingual and Multicultural Applications (3)
Prerequisite: Computer Science 310.
Principles, techniques, and resources for designing and utilizing globalized XML documents in multilingual and multicultural information systems.

CS 545. Introduction to Web Application Development (3)
(Offered only in Extension)
Prerequisite: Computer Science 310.

CS 546. Human Computer Interfaces (3)
(Offered only in Extension)
Prerequisites: Computer Science 310 and 320.
Common interface idioms and support available for loose integration into aesthetically appealing and practical, efficient interaction between humans and machine. Editors, browsers, games, networking sites, posting boards, etc. Principles that are ubiquitous among tools for HCI development.

CS 547. Programming and Scripting Languages for Web Applications (3)
(Offered only in Extension)
Prerequisites: Computer Science 310 and 320.
Principles and practice of dynamic and scripting and functional languages used in web applications. Basic language concepts, data structures in dynamic languages, code structure, code quality, testing, string manipulation, dynamic code generation.

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

CS 551. User Interface Environments (3)
Prerequisites: Computer Science 310 and 320.
Design of user-machine interfaces in interactive systems. Problems faced by user of an interactive system; basic issues and principles involved in design and implementation of good and friendly user-machine graphical interfaces.

CS 552. Artificial Intelligence II (3)
Prerequisite: Computer Science 550.
Limitations of symbol-based approach to artificial intelligence from Computer Science 550. Presented alternatives are genetic and probabilistic approaches, connectionist and emergent representation and learning, natural language processing, intelligence measures and cognitive models. Seminal publications shaping these techniques.

CS 553. Neural Networks (3)
Prerequisites: Computer Science 320 and Mathematics 254.
Principles of neural networks, their theory and applications.

CS 556. Robotics: Mathematics, Programming, and Control (3)
Prerequisites: Computer Science 320, Mathematics 254, knowledge of the C programming language.
Robotic systems including manipulators, actuators, sensors, and controllers. Kinematics of planar robots. Design and implementation of robot joint controllers. Robot programming languages and environments, and robot command interfaces.

CS 558. Computer Simulation (3)
Prerequisites: Computer Science 310 and Statistics 550.
Methodology of simulation for discrete and continuous dynamic systems. State-of-the-art programming techniques and languages. Statistical aspects of simulation. Students will design, program, execute, and document a simulation of their choice.

CS 559. Computer Vision (3)
Prerequisites: Computer Science 310 and Mathematics 254.
Algorithms and computer methods for processing of images. Visual perception as a computational problem, image formation, characterization of images, feature extraction, regional and edge detection, computer architectures for machine vision.

CS 560. Algorithms and Their Analysis (3)
Prerequisite: Computer Science 310.
Algorithms for solving frequently occurring problems. Analysis techniques and solutions to recurrence relations. Searching and sorting algorithms. Graph problems (shortest paths, minimal spanning trees, graph search, etc.). NP complete problems. Not acceptable for the M.S. degree in Computer Science.

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

CS 570. Operating Systems (3)
Prerequisites: Computer Science 310, 370, and knowledge of the C programming language.
Basic concepts, operating systems, 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 570.
Basic networking concepts such as seven-layer reference model, transmission media, addressing, subnetting and supernetting, networking devices, LANs and WANs, internetworking, distributed processing, and client-server model. Basic concepts and protocols of TCP/IP protocol suite and basic Internet services.
CS 580. Client-Server Programming (3)
Prerequisites: Computer Science 570 and knowledge of an object-oriented programming language. Recommended: Computer Science 576.
Client-server model, networking protocols for client-server programs, algorithmic issues in client-server programs, client-server protocols, implementing client-server applications.

CS 581. Computational Linguistics (3)
(Same course as Linguistics 581)
Prerequisites: Computer Science 260 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 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 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

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

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

CS 605. Scientific Computing (3)
(Same course as Computational Science 605)
Prerequisites: Graduate standing and knowledge of the C programming language or FORTRAN or Computational Science 526.
Parallel programming using message passing to include high performance computing and MPI language extensions. (Formerly numbered Computer Science 505.)

CS 615. Spatial Database (3)
Prerequisite: Computer Science 514. Recommended: Computer Science 560.
Strategies for databases in which locations are prominent. Access strategies such as quadtrees and R-trees. Topological and other spatial extensions to query languages. Spatial models like non-intersection. Oracle spatial features. Object and object-oriented databases.

CS 620. Formal Languages and Syntactic Analysis I (3)
Prerequisites: Computer Science 310, 320 or 520, and 562.
Regular, context-free, context-sensitive, and general grammars. Corresponding machine model recognizers. Chomsky and Greibach normal forms. Closure, decidability and undecidability properties. (Formerly numbered Computer Science 620A.)

CS 632. Advanced Software Engineering (3)
Prerequisite: Computer Science 532.
Theoretical and practical concepts associated with the specification, design, testing, and maintenance of large software systems. Use of automated tools in engineering such systems.

CS 635. Advanced Object-Oriented Design and Programming (3)
Prerequisites: Computer Science 535 and knowledge of an object-oriented programming language.
Advanced topics in object-oriented programming and design, code reuse, building class libraries, quality of objects, coupling, cohesion, design patterns, distributed objects.

CS 636. Management of Software Development (3)
Prerequisite: Computer Science 522 or 535.
Managing software projects. Modern software management process models. Project planning, cost estimation, tracking and control, staffing, risk management, and software process improvement.

CS 645. Advanced Web Application Development (3)
(Offered only in Extension)
Prerequisite: Computer Science 545.
XHTML, CSS, JavaScript, client-side and server-side scripting, Java servlets, JSP, Frameworks. Server systems and development tools appropriate for large, complex project. SQL database via JDBC.

CS 646. Mobile Application Development (3)
(Offered only in Extension)
Prerequisite: Computer Science 545.
Emerging technologies, issues, and concepts in Web and mobile software development. May be repeated with new content. See Class Schedule for specific content, including device types. Maximum credit six units applicable to a master’s degree.

CS 648. Emerging Web and Mobile Technologies (3)
(Offered only in Extension)
Prerequisite: Computer Science 545.
Emerging technologies, issues, and concepts in Web and mobile software development. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

CS 650. Seminar in Artificial Intelligence (3)
Prerequisites: Computer Science 550.
General problem-solving programs, expert problem solving, game-playing programs, pattern recognition and natural language processing. Understanding vision, manipulation, computer decision. May be repeated with new content with approval of graduate adviser. Maximum credit six units applicable to a master’s degree.

CS 651. Advanced Multimedia Systems (3)
Prerequisite: Computer Science 550.
System aspects of multimedia authoring, browsing, and database subsystems. Formal models for hypermedia documents. Conversion of flat text into hypertext. Artificial intelligence in hypermedia systems. Architectures, design, and implementation of multimedia support systems. Use of multimedia technology in software engineering.

CS 652. Emergent and Adaptive Computation (3)
Prerequisite: Computer Science 550 or 552.
Computational models based on complex systems. Distributed approaches to adaptation. Emergence of collective behavior. Population-based techniques including swarm optimization, ant-colony algorithms and cellular-automata. Intrusion detection and other applications of artificial immune systems. Classifier systems, evolutionary computation and other adaptive frameworks.

CS 653. Data Mining and Knowledge Discovery (3)
Prerequisite: Computer Science 320.
Foundations of data mining and knowledge discovery. Diverse methods, algorithms, design techniques and application practice including statistical and Bayesian methods, pattern recognition, clustering, knowledge discovery in data sets, machine learning, neural networks, rough and fuzzy sets.

CS 656. Advanced Robotics (3)
Prerequisite: Computer Science 556.
Computer-based techniques for low-, medium-, and high-level robot control including sequential and parallel schemes for robot dynamics, robot programming and robot task planning.
CS 657. Intelligent Systems and Control (3)
Prerequisites: Computer Science 535 and 560 or Computer Science 530.
Genetic and evolutionary algorithms, genetic programming and applications, fuzzy logic and approximate reasoning, rule-based inference engines, intelligent path planning and applications to robotics, dynamic systems and their simulations using Simulink, conventional control and intelligent control, intelligent agents, autonomous and multi-agent systems.

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

CS 661. Geometric Algorithms (3)
Prerequisite: Computer Science 560.
Modern algorithmic solutions to problems where spatial data structures are relevant. Convex hull, triangulation, orthogonal range searching, trapezoidal decomposition, Voronoi diagrams, Delaunay triangulations. Apt for computer graphics, GIS, robotics, etc.

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

CS 664. Theory of Computability (3)
Prerequisite: Computer Science 562.
Turing machines and other formal models of computation. Recursive function theory. The Ackermann function. Solvable and unsolvable problems.

CS 670. Advanced Operating Systems (3)
Prerequisite: Computer Science 570.
Survey of advanced operating systems including distributed systems. Associated design issues. Case studies.

CS 678. Broadband Communication Networks (3)
Prerequisite: Computer Science 576.
High performance communication technologies and protocols, SONET/SDH, ATM, Ethernet, TCP/IP, wireless LANs, cellular telephony and satellite communication.

CS 682. Speech Processing (3)
Prerequisites: Graduate standing, Computer Science 310, Mathematics 254, Statistics 551A.
Algorithms and methods for processing of speech. Feature extraction, human speech production and perception, pattern recognition for acoustic and language modeling as applied to automatic speech and speaker recognition.

CS 683. Emerging Technologies (3)
Prerequisites: See Class Schedule for prerequisites.
Emerging technologies in computing, Issues and concepts underlying new technology. Hands-on experience. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

CS 689. Scientific Visualization (3)
Prerequisite: Mathematics 254.
Cognitive principles governing effective design and analysis of data representations, design strategies for enhancing dimensionality and information density of visual portrayals of information; survey of and practice in use of available software tools for visualization.

CS 696. Selected Topics in Computer Science (3)
Prerequisite: Consent of instructor.
Intensive study in specific areas of computer science. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

CS 790. Practicum in Teaching of Computer Science (1) Cr/NC
Prerequisite: Award of graduate teaching associateship in computer science.
Supervision in teaching computer science. Lecture writing, style of lecture presentation and alternatives, test and syllabus construction, and grading system. Not applicable to an advanced degree. Required for first semester GTA's.

CS 797. Research (1-3) Cr/NC/RP
Prerequisites: Six units of graduate level computer science courses.
Research in computer science. Maximum credit six units applicable to a master's degree.

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

Faculty
Louis M. Rea, Ph.D., Professor of Public Affairs, Interim Director of
School of Public Affairs (M.P.A. Graduate Coordinator)
Ruth Xiaoru Liu, Ph.D., Professor of Sociology
Sheldon X. Zhang, Ph.D., Professor of Sociology
Michael A. McCall, Ph.D., Associate Professor of Sociology
Jeffrey S. McIllwain, Ph.D., Associate Professor of Public Affairs
Dana M. Nurge, Ph.D., Associate Professor of Public Affairs,
(Graduate Coordinator)
Sherry Ryan, Ph.D., Associate Professor of Public Affairs
Paul J. Kaplan, Ph.D., Assistant Professor of Public Affairs
Alan C. Mobley, Ph.D., Assistant Professor of Public Affairs

Associateships
Graduate teaching associateships and graduate assistantships
are available to a limited number of qualified students. Please speak
with program director for more information. This program can prepare
students for a career in college teaching.

General Information
The School of Public Affairs in the College of Professional Studies
and Fine Arts, in conjunction with the Department of Sociology in the
College of Arts and Letters, offer graduate study leading to the Master
of Science degree in criminal justice and criminology.

Students pursuing a Master of Science degree in criminal justice
and criminology will master criminological theory and quantitative
research methods and will learn to apply the theory and methods to
real-world research and policy issues. Students will also examine
criminal justice policy issues at the local, state, national, and interna-
tional levels.

Research facilities include the Institute of Public and Urban Affairs
and the Social Science Research Laboratory. The San Diego metropo-
litan 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 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) English language score, if medium of instruction was in a
language other than English (http://www.ets.org, SDSU
institution code 4682).

School of Public Affairs
The following materials should be mailed or delivered to:

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

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

Advancement to Candidacy
All students must satisfy the general requirements for
advancement to candidacy as described in Part Four of this bulletin.
Specific Requirements for the Master of Science Degree
(Major Code: 22091) (SIMS Code: 662001)
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree in Part Four of this bulletin, students must complete an officially approved course of study as outlined below. Students must earn a minimum grade point average of B (3.0) in the master’s program and no less than a B- grade in each core course. All students in this program will complete a thesis or project (Plan A) or comprehensive written examination (Plan B).

Graduate Program (30 units total)
Substantive Courses (15 units required):
- CJ 601 Seminar in the Administration of Criminal Justice (3)
- CJ 602 Seminar in Comparative Criminal Justice System (3)
- CJ 603 Seminar in Community and Restorative Justice (3)
- CJ 604 Seminar in Criminal Justice and Urban Administration (3)
- CJ 605 Seminar in Juvenile Justice and Youth Violence (3)

Research Methods Courses (6 units required):
- 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

Courses Acceptable on Master’s Degree Program in Criminal Justice and Criminology (CJ)
Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

UPPER DIVISION COURSES

CJ 510. Contemporary Issues in Law Enforcement (3)
Prerequisite: Criminal Justice 310.
Assessment of problems confronting administrators of law enforcement agencies and of recent efforts to enhance the capability of agencies to control criminal activity while guarding individual liberties. (Formerly numbered Criminal Justice Administration 510.)

CJ 520. Prosecutorial Function (3)
Prerequisite: Criminal Justice 300.
Prosecutor’s function at local, state, and federal levels and in selected foreign nations, including appraisal of proposed national standards and goals for prosecutors. (Formerly numbered Criminal Justice Administration 520.)

CJ 531. Probation and Parole (3)
Prerequisite: Criminal Justice 300.
Basic concepts, history, legislation, and practices used in work with juveniles and adults who have been placed on probation or parole; criteria of selection, methods of supervision, and elements of case reporting. (Formerly numbered Criminal Justice Administration 531.)

CJ 540. Applied Planning, Research, and Program Evaluation in Criminal Justice (3)
Prerequisite: Criminal Justice 300.
Application of planning, research, program development, and evaluation principles to field of criminal justice. (Formerly numbered Criminal Justice Administration 540.)

CJ 543. Community Resources in Criminal Justice (3)
Prerequisite: Criminal Justice 300.
Present and probable roles of public and private agencies and volunteers in criminal justice. (Formerly numbered Criminal Justice Administration 543.)

CJ 550. Study Abroad: Criminal Justice (3)
Prerequisites: Criminal Justice 301 and upper division standing. Selected topics in comparative criminal justice. Course taught abroad. May be repeated once with new content. See Class Schedule for specific content. Maximum credit six units.

CJ 570. Organized Crime: Domestic and International Perspectives (3)
Prerequisite: Criminal Justice 300.
Interdisciplinary analysis of organized crime’s impact on criminal justice and public policy on both domestic and international levels. (Formerly numbered Criminal Justice Administration 570.)
CJ 601. Seminar in the Administration of Criminal Justice (3)
Prerequisite: Criminal Justice 301.
Administrative problems of criminal justice systems. (Formerly numbered Criminal Justice Administration 601.)

CJ 602. Seminar in Comparative Criminal Justice System (3)
Prerequisite: Criminal Justice 301.
The criminal justice system as both cause and consequence of social change; nature of institutional change with application to criminal justice system components. (Formerly numbered Criminal Justice Administration 602.)

CJ 603. Seminar in Community and Restorative Justice (3)
Community and restorative justice movement from local, national, and international perspectives. Theories, policies, practices, and research associated with community and restorative justice. (Formerly numbered Criminal Justice Administration 603.)

CJ 604. Seminar in Criminal Justice and Urban Administration (3)
Prerequisite: Criminal Justice 540.
Influences on crime control and criminal justice process of actions by urban administrators, legislators and private sector in areas such as housing, education, public health and transportation, and urban development policies. (Formerly numbered Criminal Justice Administration 604.)

CJ 605. Seminar in Juvenile Justice and Youth Violence (3)
Prerequisite: Graduate standing.
Juvenile justice system in U.S. and throughout the world. Responses to delinquency and youth violence. History and foundations of juvenile court, juvenile justice reforms, context, causes and correlates of youth violence and gang involvement, including programs and policies designed to address these problems. (Formerly numbered Criminal Justice Administration 605.)

CJ 696. Selected Topics in Criminal Justice (3)
Prerequisite: Criminal Justice 601 or 602.
Analysis of contemporary issues of major import to the administration of criminal justice. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

CJ 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.

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.)

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
Mark A. Thayer, Ph.D., Professor of Economics, Emeritus, Chair of Department
Catalina Amuedo-Dorantes, Ph.D., Professor of Economics
Roger S. Frantz, Ph.D., Professor of Economics
James B. Gerber, Ph.D., Professor of Economics
Shoshana A. Grossbard, Ph.D., Professor of Economics
Kangoh Lee, Ph.D., Professor of Economics
Edmund M. Balsdon, Ph.D., Associate Professor of Economics
Jennifer Imazeki, Ph.D., Professor of Economics
Quazi Shahrir, Ph.D., Assistant Professor of Economics
Hisham S. Foad, Ph.D., Assistant Professor of Economics
Catalina Amuedo-Dorantes, Ph.D., Professor of Economics
Michael J. Hilmer, Ph.D., Associate Professor of Economics
Christiana E. Hilmer, Ph.D., Associate Professor of Economics
Kangoh Lee, Ph.D., Professor of Economics
Quazi Shahrir, Ph.D., Assistant Professor of Economics

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

Scholarships
Two general scholarship programs are available for qualified incoming and continuing economics M.A. students. Applications for the Terhune Scholarship and the McCuen Scholarship must be submitted to the Office of Financial Aid and Scholarships by March 1 for awards distributed the following academic year. Terhune awards can be up to $5,000 and McCuen awards can be up to $20,000 annually. The department administers several additional scholarships, which are awarded each spring semester. These include the Center for Public Economics awards ranging from $300 to $1,500. Application forms and additional information may be obtained from the department office for these scholarship opportunities.

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

Admission to Graduate Study
Students applying for admission to the Master of Arts program in economics should electronically submit the university application available at http://www.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:

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

Note:

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

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

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

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

Department of Economics
The following materials should be mailed or delivered by March 1 to:

Graduate Admissions Coordinator
Department of Economics
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4485

(1) Two letters of recommendation;

(2) A personal statement of no more than 750 words that describes why you wish to pursue graduate study in economics.

International students interested in applying should first contact the International Student Center.


Advancement to Candidacy
In addition to the general requirements for advancement to candidacy 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, and 641 with at least a 3.0 (B) average and no individual core course grade lower than a 2.7 (B-). Deficiencies may be addressed by retaking core courses.

Specific Requirements for the Master of Arts Degree
(Major Code: 22041) (SIMS Code: 111901)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree described in Part Four of this bulletin, the student must complete an approved graduate program of 32 units. Each program must include Economics 630, 631, 640, 640L, 641, 641L, 640L, 740, and 795. No program may contain more than nine units of approved courses outside economics. In addition, no program may contain more than six units of 500-level courses.

A written comprehensive examination covering the core fields of microeconomics and econometrics is required for Plan B students. Students selecting Plan A must include Economics 799A in their program and complete a master's thesis.
As an alternative to electing a general program, the student may choose to specialize in Latin American Policy Studies or Urban and Regional Policy. The specialization in Latin American Policy Studies with its applied and interdisciplinary focus, is designed to provide students with advanced training in Latin American policy issues. The specialization in Urban and Regional Policy, with its applied and interdisciplinary focus, is designed to provide students with advanced training in urban and regional policy issues.

**Specialization in Latin American Policy Studies**  
*(SIMS Code: 111925)*

- **ECON 720** Seminar in Development and Planning: Latin American Economies (3)
- **LATAM 601** Seminar on Methodology of Latin American Studies (3)

One course selected from the following:

- **HIST 558** Latin America in World Affairs (3)
- **POL S 566** Political Change in Latin America (3)
- **POL S 567** Political Systems of Latin America (3)

**ECON 596. 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
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.

The degree of Doctor of Philosophy (Ph.D.) in mathematics and science education is offered jointly with the University of California, San Diego. For specific information about this program, refer to the Mathematics and Science Education section of this bulletin.

Admission to Doctoral Study

Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee. All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the College of Education (refer to the appropriate degree section for the address to submit additional information).

Graduate Admissions

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

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

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

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

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

(1) Program application;
(2) Three academic and/or professional recommendation forms;
(3) A two to three page personal statement;
(4) GRE – a recent score;
(5) Official transcripts;
(6) Resume.

Doctor of Education (Ed.D.) Degree in Educational Leadership

The following materials should be mailed or delivered to the specialization:
- Ed.D. Program Director, PreK-12
  - Department of Educational Leadership
  - San Diego State University
  - 5500 Campanile Drive
  - San Diego, CA 92182-1109
  - OR
- Ed.D. Program Director, Community College
  - Department of Administration, Rehabilitation, and Postsecondary Education
  - San Diego State University
  - 3590 Camino del Rio North
  - San Diego, CA 92108-1716

(1) Program application;
(2) Three letters of recommendation;
(3) Professional resume;
(4) Statement of purpose;
(5) Examples of professional and/or academic writing;
(6) Employer statement of nomination or support.

Educational Specialist (Ed.S.) Degree in School Psychology

The following materials should be mailed or delivered to:
- Department of Counseling and School Psychology
  - Attention: School Psychology Program Director
  - San Diego State University
  - 5500 Campanile Drive
  - San Diego, CA 92182-1179

(1) Vita or resume;
(2) Personal statements and essays (see Web site for essay questions);
(3) At least three letters of recommendation;
(4) Supplemental material to enhance evaluation of your academic, professional, and cross-cultural readiness (e.g., course papers or projects, an evaluation from work, a brief videotape of you working with children);
(5) Students must obtain the California certificate of clearance prior to beginning the field experience sequence in the fall semester of their first year;
(6) The California Basic Educational Skills Test (CBEST) is required by the State of California prior to beginning the sequence of studies. The program does not require passing the CBEST for
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.

Doctor of Philosophy Degree in Education
(Major Code: 08011) (SIMS Code 331901)
http://edweb.sdsu.edu/doc

Admission to the Degree Curriculum

The Doctor of Philosophy (Ph.D.) program in education is offered jointly by the faculty in the College of Education at San Diego State University (SDSU) and the faculty in the School of Educational Studies at Claremont Graduate University (CGU). The mission of the Ph.D. program in education is to develop scholars who are committed to research on democratic schooling, social justice and equal educational outcomes for all students, and the improvement of educational systems serving diverse communities. Such scholars are capable of providing leadership in building a more democratic society through responsive systems of education and making sense of complex data. The Ph.D. program emphasizes issues in educating a multicultural society. It prepares students for the challenges and opportunities, which such diversity creates. While maintaining a focus on diversity, the student pursues an individualized program of study supervised by faculty members from both SDSU and CGU.

In addition to meeting the general requirements for admission to both institutions with classified graduate standing as outlined in their current bulletins, students must be recommended for admission by the program’s admissions committee on the basis of excellence as evidenced in the following materials:

1. Program application;
2. An earned master’s degree in education or a related field from an accredited institution with a cumulative GPA of 3.0 or above;
3. Sufficient experience pertinent to the mission of the program to benefit from the program;
4. Acceptable scores on the Graduate Record Examination (GRE);
5. Three recommendation forms attesting to the academic and professional skills necessary for doctoral studies;
6. A personal statement of purpose reflecting the skills, experiences, and dispositions appropriate for the program;
7. Professional resume; and
8. A personal interview with the program director or admissions committee.

Students seeking admission to the SDSU/CGU Ph.D. program in education can obtain application materials online at http://coe.sdsu.edu/doc/prospective/applications.php.htm. Any questions about the program should be directed to Dr. Rafaela M. Santa Cruz, director of the program.

Advancement to Candidacy

Advancement to candidacy occurs when the institutional form signed by the dissertation committee approving the dissertation proposal is processed. It is CGU policy that the oral defense of the dissertation not be scheduled sooner than six months after advancement to candidacy.

Specific Degree Requirements for the Ph.D. Degree in Education

- 72 semester units (minimum) of coursework (24 units at San Diego State University, 24 units at Claremont Graduate University, and 24 units transferred from master’s degree);
- Two research tools (one at each institution);
- Three written qualifying examinations;
- The oral qualifying examination;
- A written dissertation;
- The dissertation defense.

A minimum of 48 semester units of residency, 24 at each institution, is required before a student is eligible to schedule the oral qualifying examination. In the interest of establishing an effective working relationship with faculty at both SDSU and CGU, 12 of the student’s first 24 units must be taken at CGU.

Research Tools

Two research tools are required. Their purpose is to assure proficiency in research methodologies including those most likely to be used in the dissertation project. One research tool in intermediate quantitative methods is satisfied by receiving a grade of B or better in ED 820 at SDSU. The second research tool may completed through course work in advanced quantitative methods or in other research methods with a grade of B+ or better, by proving competency in a second language relevant to your doctoral research, or by special arrangement with a faculty member at CGU.

Written Qualifying Examinations

Three written qualifying examinations are required. While they most often take the form of papers, a literature review on research interests, or take-home examinations, other possibilities may also be explored in consultation with faculty. Written evidence of conference presentations or published materials demonstrating expertise in an area of research, proposals for external funding, videotapes, computer-based exhibits, a school or school district plan, a program evaluation, a syllabus, course materials and evaluations for a college course, or such other products as may appropriately demonstrate the student’s competence may serve as written qualifying examinations with a supervising faculty member’s approval.

Oral Qualifying Examination

The oral qualifying examination is scheduled when all coursework, including research tools, has been completed and all three written qualifying examinations have been approved. Through the oral qualifying examination the student is called upon to demonstrate a range and depth of understanding of the field of education. The examination serves to determine whether or not the student has made satisfactory progress in developing capacities for understanding diversity, critical analysis, systemic change for performance improvement, community transformation, effective educational practice, and original research to be advanced to candidacy for the doctorate. The oral is a discussion and examination of the work completed in the Ph.D. program to this point, including but not limited to the work demonstrated in written qualifying examinations.
Dissertation

All doctoral students will complete a research-based dissertation. The dissertation will typically focus on (a) understanding diversity and its implications for education, (b) critically analyzing and developing educational policy, (c) engaging in systemic organizational change that improves performance and quality of life for all, (d) applying theory and research-based knowledge in transforming communities, or (e) using effective educational practices, including tools available through technology, to transform organizations. The primary goal of the dissertation is contributing to the knowledge base in education.

Dissertation Defense

The program coordinator schedules the dissertation defense upon notification by the dissertation committee that the dissertation draft is approved. The dissertation committee conducts the defense and may request revisions to the final dissertation manuscript during the oral defense.

Performance Expectations

Joint doctoral students must maintain a 3.0 GPA to be in good academic standing. Students must be continuously enrolled for the duration of their program by taking classes at either institution. Once required coursework at both SDSU and CGU has been completed, the student is required to maintain continuing registration at CGU through completion of all degree requirements.

Faculty

The faculty bring diverse research and teaching interests to the study of democratic schooling, social justice, and diversity in education. Among the members of the faculty, the student will find rich resources of expertise in such areas as public policy, organizational theory and leadership, curriculum and instruction, higher education, counseling and school psychology, language development, qualitative and quantitative analysis, bilingual and cross-cultural education, educational technology, and special education.

San Diego State University

Director: Rafaela M. Santa Cruz

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 and community college/postsecondary leadership;
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 her/his professional responsibilities;
11. A personal interview with the Admissions and Standards Committee including a written response to a prompt provided by the committee.

Meeting the minimum requirements qualifies an individual for consideration, but does not guarantee admission to the program. Admission will be granted on a competitive basis.

Advancement to Candidacy

The written qualifying examination will occur at the end of the fourth semester in the program. The examination will cover the three areas of the program: (a) leadership core courses, (b) research methodology courses, and (c) concentration courses completed up to that time. The structure of the examination will be developed by the executive committee and administered by the program directors.

Once the doctoral student successfully completes the qualifying examination and has successfully completed all required courses at that stage in the program, the doctoral student will be advanced to candidacy.
Specific Requirements for the Ed.D. in Educational Leadership

Core Curriculum Requirements (27-30 units)

ED 815 Re-Thinking Leadership (3)
ED 836 Research and Writing Support (6-9) Cr/NC
ED 840 Seminar in Leadership in a Diverse Society (3)
ED 850 Seminar in Quantitative Methods of Inquiry (3)
ED 851 Seminar in Qualitative Methods of Inquiry (3)
ED 855 Seminar in Leadership for Developing Educational Systems (3)
ED 860 Seminar in Leadership and Educational Change (3)
ED 885 Seminar in Educational Program Planning and Evaluation (3)

Dissertation (12 units)

ED 899 Doctoral Dissertation (12) Cr/NC/RP

Concentration in PreK-12 School Leadership (18 units)

(Major Code: 08272) (SIMS Code: 331931)
EDL 720 Human Resource Development in PreK-12 Educational Organizations (3)
EDL 755 Governance and Policy Development in PreK-12 Learning Organizations (3)
EDL 760 Practicum in PreK-12 Educational Organizations (3) Cr/NC/RP
EDL 830 Leadership for Learning (3)
EDL 880 Seminar in Topics in Educational Leadership (6)

Concentration in Community College/Postsecondary Leadership (21 units)

(Major Code: 08273) (SIMS Code: 331932)
ARP 760 Internship in Postsecondary Educational Leadership (3) Cr/NC/RP
ARP 801 Seminar in Community College History and Development (3)
ARP 810 Seminar in Community College Law and Finance (3)
ARP 811 Seminar in External Partnerships for Community Colleges (3)
ARP 812 Seminar in Budget and Resource Management in Community Colleges (3)
ARP 813 Strategic Planning in Community Colleges (3)
ARP 827 Seminar in Emerging Issues in Postsecondary Educational Leadership (3)

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

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

Dissertation

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

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

Final Examination (Oral)

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

Additional Requirements

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

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

Performance Expectations

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

Doctoral students who fail to make satisfactory academic progress may be officially disqualified from the university in writing after consultation with the executive committee. A doctoral student may be disqualified because of unsatisfactory academic progress only after a careful review and written recommendation by the Ed.D. program faculty. To ensure that a decision to disqualify a doctoral student from the program is just, basic due process requirements will be met, including an opportunity for appeal by the doctoral student following the guidelines in the Graduate Bulletin. A doctoral student who has been disqualified is considered to have been terminated from the university and will not be allowed to continue in the program, enroll in courses, or register again without readmission.

Faculty

The following faculty are available for teaching and serving on doctoral committees:

Administration, Rehabilitation and Postsecondary Education
Bresciani, Degeneffe, Hampton, Harris, Jacobs, Jeffcoat, McFarlane, Olney, Piland, Sax

Educational Leadership
Basom, Cohn, Johnson, Meno, Pumpian, Uline
Doctor of Education Degree (SDSU/USD)  
(Major Code: 08011) (SIMS Code: 331902)  
http://www.sandiego.edu/soles/programs/learning_and_teaching/graduate_programs/joint_doctoral/  

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

Admission to the Degree Curriculum  
Students are admitted to this degree program in the fall term only, and applications for admission must be received by February 15. Application materials may be obtained from Cheryl L. Mason, program director at SDSU. The information can also be obtained on the program Web site at http://www.sandiego.edu/academics/soles/acadprog/jointdocprog. Not all fields in which the degree is offered are available every year and cohorts of students will be accepted for admission as one or more of the fields become available. For the specific degree offerings open for admission each year, contact the program director at SDSU.

To be considered for admission to the SDSU/USD program, students must meet the general requirements for admission to both San Diego State University and the University of San Diego. These include a master's degree in education or a related field from an accredited institution, good academic standing in the last institution attended, an acceptable score on the Graduate Record Examination, and experience in the field. Applicants must submit original copies of all transcripts of previous college work, three letters of recommendation, a personal statement, a professional resume, and results of the Graduate Record Examination. Personal interviews are conducted for the most promising applicants.

Specific Degree Requirements for the Ed.D. Degree in Education  
The faculties of the Colleges of Education at San Diego State University and at the University of San Diego jointly offer professional programs leading to the degree. This degree emphasizes the preparation of educational leaders and practitioners who can make significant contributions to solving problems in education and fostering the improvement of schools and other learning environments.

The program requires a minimum of 60 units of graduate level coursework. At least 24 course credits and six units of dissertation must be completed on each campus. All students will complete 15 units of core courses as well as six units of coursework in advanced research. With the concurrence of a faculty adviser, students will develop an area of study directly related to their educational objective.

Upon completion of 12 units of study, each student will meet with an adviser and a joint faculty committee to assess progress in the program, to develop a program of study, and to define a research focus. After 30 semester units have been completed, students are eligible to begin the qualifying examinations process. Students who successfully complete these examinations will be recommended for advancement to candidacy and will be eligible to begin the dissertation phase of the program. Once enrolled for dissertation units, students must maintain continuous registration in that course until the doctoral faculty approves the dissertation. Once enrolled for dissertation, students are ineligible to apply for an official leave of absence.

If students do not graduate at the end of the spring semester of their fifth year in the program and instead plan to graduate during the following summer, they must enroll in one dissertation unit at USD and petition both universities for graduation. Any students not graduating before the beginning of the fall semester of their sixth year in the program must enroll for three dissertation units at USD up until and including the semester of planned graduation. They must have applied for graduation at both universities the semester they actually graduate.

Faculty  
The following members of the cooperating institutions participate in the joint Doctor of Education degree and are available for direction of research and as members of doctoral committees:

San Diego State University  
Director: Cheryl L. Mason  

University of San Diego  
Director: Jerome Ammer  
Faculty: Alexandrowicz, Barnes, Collins, Cordeiro, Dantas, Donmoy, Galloway, Gelb, Getz, Hubbard, Infantino, Inoue, Monroe, Quezada, Rowell, Schneider, Sisserson, Zygliscynski

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.
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 facilities 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](http://www.csumentor.edu).
2. The following materials should be submitted as a complete package to:
   - Graduate Admissions
   - Enrollment Services
   - San Diego State University
   - San Diego, CA 92182-7416
   a. Official transcripts (in sealed envelopes) from all postsecondary institutions attended;
   b. GRE scores (official notification);
   c. If medium of instruction was in a language other than English, official notification of English language score plus Test of Written English.
3. The following materials should be submitted as a complete package to:
   - School Psychology Program Admissions Committee
   - Department of Counseling and School Psychology
   - College of Education, San Diego State University
   - 5500 Campanile Drive
   - San Diego, CA 92182-1179
   a. Completed program application checklist;
   b. Three letters of recommendation;
   c. Personal statement;
   d. Curriculum vita;
   e. The California Basic Educational Skills Test (CBEST) (Out-of-state applicants may take the CBEST in their first semester);
   f. Supplemental material to enhance evaluation of your academic, professional, and cross-cultural readiness (e.g., course papers or projects, an evaluation from work, a brief videotape of you working with children). Applicants whose grade point averages fall below the university standard of 2.85 in the last 60 semester units or in the major MUST supply additional data in support of their academic readiness;
   g. Program Application Affidavit. Students must obtain the California Certificate of Clearance prior to beginning the field experience sequence in the fall semester of their first year. Admission is a two-phase process: (1) completion of the application portfolio and (2) small group interviews using authentic assessment activities. Successful applicants will demonstrate academic, professional, and cross-cultural readiness for this demanding graduate-professional program. It is strongly recommended that applicants have an undergraduate major or substantial coursework in behavioral sciences (e.g., psychology, sociology, social work), education (or liberal studies), child development, and/or ethnic studies prior to entering the program. The following courses are especially recommended: general psychology, developmental psychology, research and statistics in behavioral sciences, learning or cognition, social psychology or sociology, multicultural or culture-focused studies, and psychological or educational testing and measurement.

**Application materials become the property of the program and will not be returned to the applicant. No minimum set of qualifications in any way guarantees admission. Additional information about the program can be found at [http://edweb.sdsu.edu/CSP/programs/sp](http://edweb.sdsu.edu/CSP/programs/sp).**

**Advancement to Candidacy**

All students must meet the general requirements for advancement to candidacy, as described in Part Four of this bulletin and be recommended by the faculty. A student who holds classified standing may be advanced to candidacy for the M.A. degree with Concentration in Counseling after completing at least 12 units of coursework on the official M.A. program of study with a minimum grade point average of 3.0 (B). Advancement to candidacy for the Ed.S. degree occurs when general requirements have been met and the student has earned a minimum grade point average of 3.0 (B) in at least 30 units listed on the official Ed.S. program of study.

**Specific Requirements for the Educational Specialist Degree in School Psychology**

In addition to meeting the requirements for admission to the university with classified graduate standing, the student must satisfy the basic requirements for the master’s degree described in Part Four of this bulletin. In addition, the student must demonstrate and document, in a comprehensive culminating portfolio, the integration and application of theory, research, and skills appropriate to the practice of school psychology. It is expected that the student will complete the portfolio concurrently with enrollment in CSP 780, Internship.

**Curricular Requirements for the Ed.S. in School Psychology**

The school psychology program demands a specific sequence of courses and supervised experiences across seven curricular areas. The student, in collaboration with the adviser, must file the program’s sequence of study form prior to taking courses to ensure that all requirements are fulfilled in the correct sequence. The student entering with a bachelor’s degree must complete a minimum of 76 units in the seven areas of the M.A./Ed.S. program, with course selection in collaboration with the adviser and consistent with the program structure, as indicated below. Students admitted to the Ed.S. or credential-only programs, with a graduate degree in a closely related field, may have completed graduate coursework consistent with the seven areas of the school psychology program. Such students may petition for course waiver(s) by presenting documentation of successful completion of comparable courses and attainment of associated knowledge and competencies; however, (a) a minimum of 46 units must be completed in the SDSU Ed.S. program and (b) the full-complement of knowledge and skills must be demonstrated in each of the seven areas prior to recommendation for the Ed.S. degree and/or credential. Courses marked with an asterisk may be applied to the 30-unit M.A. in Education with Concentration in Counseling.
1. Professional School Psychology (a minimum of 12 units)
   CSP 752 Seminar and Practicum: School Psychology (3-6) Cr/NC
   And a minimum of six units from the following:
   CSP 710A Professional Seminar (3)
   CSP 710B Professional Seminar (3)
   CSP 730 Fieldwork in Counseling (2-6) Cr/NC
   Or other course(s) in the department or in a related field approved by adviser.

2. Research and Program Evaluation (a minimum of 12 units)
   *ED 690 Methods of Inquiry (3)
   *ED 795A Seminar (3)
   CSP 760 Advanced Seminar in School Psychology (3)
   And a minimum of three units from the following:
   CSP 745 Program Development and Evaluation in Pupil Services (3)
   CSP 770 Advanced Seminar in Counseling (3)
   CSP 790A Specialist's Project in School Psychology (3) Cr/NC/RP
   Or other course(s) in the department or in a related field approved by adviser.

3. Social and Cultural Foundations (a minimum of six units)
   *CSP 622A Ecosystems Assessment-Intervention I: Students (3)
   And a minimum of three units from the following:
   CSP 610B Determinants of Human Behavior: Social and Cultural (1-3)
   *CSP 615 Seminar in Multicultural Dimensions in Counseling (3)
   Or other course(s) in the department or in a related field approved by adviser.

4. Educational Foundations (a minimum of 10 units)
   *CSP 622B Ecosystems Assessment – Intervention II: Schools (3)
   And a minimum of seven units from the following:
   CSP 740 Practicum (1-6) Cr/NC
   SPED 651 Legislation, Leadership, and Management for Special Education Services (3)
   Or other course(s) in the department or College of Education approved by adviser.

5. Psychological Foundations (a minimum of nine units)
   CSP 610D Determinants of Human Behavior: School Learning (3)
   And a minimum of six units from the following:
   *CSP 610C Determinants of Human Behavior: Development (3)
   *CSP 610E Determinants of Human Behavior: Biological (3)
   Or other course(s) in the department or in a related field approved by adviser.

6. Assessment-for-Intervention (a minimum of 15 units)
   CSP 746 Dynamic Assessment and Mediated Interventions (3)
   And a minimum of 12 units from the following:
   *CSP 623 Ecobehavioral Assessment-Intervention (3)
   CSP 641 Psychometrics in Counseling and School Psychology (1)
   CSP 643A Psychoeducational Evaluation Techniques: Psychological Processing (1) Cr/NC
   CSP 643B Psychoeducational Evaluation Techniques: 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 along with the $55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the College of Education (refer to the appropriate degree section for the address to submit additional information).

Graduate Admissions

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

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

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

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

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

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

Master of Science Degree in Rehabilitation Counseling (Major Code: 12221)

The following materials should be mailed or delivered to:

Interwork Institute
(Attention: Graduate Adviser)
San Diego State University
3590 Camino del Rio North
San Diego, CA 92108-1716

(1) Department application (http://interwork.sdsu.edu/arpe/);

(2) Letters of reference;

(3) Personal statement.

Master of Science Degree in Counseling School Counseling (Major Code: 08261) (SIMS Code: 331021)

The following materials should be mailed or delivered to:

Department of Counseling and School Psychology
School Counseling Program
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1179

(1) Completed program application form (http://edweb.sdsu.edu/csp/admissions/admissions.htm);

(2) Three letters of recommendation;

(3) Personal statements;

(4) Resume.

Master of Science Degree in Counseling Marriage and Family Therapy (Major Code: 08261) (SIMS Code: 331006)

The following materials should be mailed or delivered to:

Department of Counseling and School Psychology
Marriage and Family Therapy Program
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1179

(1) Completed program application form (http://edweb.sdsu.edu/csp/admissions/admissions.htm);

(2) Three letters of recommendation;

(3) Personal statements;

(4) Resume.

Master of Arts Degree in Education Counseling (Major Code: 08261) (SIMS Code: 331021)

The following materials should be mailed or delivered to:

Department of Counseling and School Psychology
Community Based Block Program
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1179

(1) Completed program application form (http://edweb.sdsu.edu/csp/admissions/cbbadmission.htm);

(2) A personal statement;

(3) Employment and educational history;

(4) Three letters of recommendation.

Educational Leadership: Specialization in Postsecondary Education (Major Code: 08271)

Educational Leadership: Specialization in Student Affairs in Postsecondary Education (Major Code: 08271) (SIMS Code: 331913)

The following materials should be mailed or delivered to:

Interwork Institute
(Attention: Graduate Adviser)
San Diego State University
3590 Camino del Rio North
San Diego, CA 92108-1716

(1) Department application (http://interwork.sdsu.edu/arpe/);

(2) Two letters of recommendation.

Educational Leadership: Specialization in PreK-12 (Major Code: 08271)

The following materials should be mailed or delivered to:

Department of Educational Leadership
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1190

(1) Department application;

(2) Two letters of recommendation;

(3) California Basic Educational Skills Test (CBEST) scores.
Educational Technology  
(Major Code: 08992) (SIMS Code: 331937)  
The following materials should be mailed or delivered to:  
Department of Educational Technology  
Campus Program  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1182  
(1) Department application available at http://edtec.sdsu.edu/apply.htm;  
(2) Three letters of recommendation (in sealed envelopes);  
(3) Personal statement.

Secondary Curriculum and Instruction  
(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  
(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).

Elementary Curriculum and Instruction  
(Major Code: 08021) (SIMS Code: 331946)  
The following materials should be mailed or delivered to:  
School of Teacher 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.

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 Degree in Education  
(Advice to the Degree Curriculum  
Applicants must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. In addition, applicants must have completed a minimum of 12 units in professional education courses and must either be admitted to the program of teacher education or hold a valid California credential, other than an emergency or provisional credential, before being recommended for classified graduate standing. (This is not applicable to students in the Departments of Administration, Rehabilitation and Postsecondary Education, Counseling and School Psychology, Educational Technology, Special Education, and Teacher Education.)  
A student desiring a concentration in educational leadership must, in addition to the above, meet specific requirements for admission to the appropriate advanced credential program. A student desiring a master's degree concentration in counseling, policy studies, or in special education must also meet specific admission requirements. (For further information, refer to the College of Education, Office of Graduate Programs, or to the coordinators of the respective programs. Students in counseling and school psychology should go to the Department of Counseling and School Psychology Web site http://edweb.sdsu.edu/csp/)

Advancement to Candidacy  
A student desiring a Master of Arts degree in education with a concentration in educational leadership, counseling, educational research, educational technology, elementary curriculum and instruction, reading education or secondary curriculum and instruction may be advanced to candidacy upon completion of the basic requirements as described in Part Four of this bulletin.
Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for admission to the university with classified graduate standing and the credential requirements as applicable, the student must satisfy the basic requirements for the master’s degree described in Part Four of this bulletin. In addition, the student must meet the requirements specified for one of the concentrations in education (described below). Courses common to all concentrations are Education 690 or Teacher Education 634, and Plan A, which requires Education 799A, or Plan B, in which three options are available, Education 791A (3 units) and 791B (1 unit); or Education 791A (3 units) and 791B (3 units); or Education 795A (3 units) and 795B (3 units). All candidates for the Master of Arts degree in education who elect Plan B must pass a comprehensive examination.

The Comprehensive Examination

This written examination, designed to evaluate the achievement in the specific area of the student’s concentration, is required of all candidates for the master’s degree in education. A student is eligible to take the comprehensive examination only after advancement to candidacy.

The examination is offered near the midpoint of each semester. A reservation must be made at least one week in advance of the examination for information on exact dates and for a reservation with the faculty adviser, and submitted to 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 halfway through the program, has secured an adviser and established a thesis plan, permission to transfer to Plan A may be requested. Plan A is designed for students who have a particular research problem they wish to investigate in some detail. Requests for transfer to Plan A must be prepared as an official change in program for the master’s degree, countersigned by the faculty adviser, and submitted to the Office of Graduate Programs in the College of Education.

Both Plan B options provide students the opportunity (1) to have two experiences which emphasize research or evaluation and writing, (2) to participate actively in the projects of the other members of the seminar, and (3) to subject their own work to critical evaluation by the other seminar members. Both plans require the ability to formulate and define research or evaluation problems, to assemble data pertinent to the problem, to draw conclusions, and to present the study in acceptable written form. It is expected that the two seminars will be at least as demanding as the thesis with respect to the difficulty and quantity of work required. Selection of one of the Plan B options must be made with the approval of the departmental faculty adviser.

Course Requirements

Note: Students are requested to consult with the appropriate master’s degree adviser prior to taking any coursework leading to the master’s degree. Students are urged to take Education 690 (3 units) as early as possible in their first graduate year.

Concentrations

Counseling

Community Based Block

(Major Code: 08261) (SIMS Code: 331021)

The Community Based Block (CBB) program is a special unit within the Department of Counseling and School Psychology that offers full-time study leading to the Master of Arts degree. The CBB seeks to develop the counseling skills of relationship building, process and therapeutic intervention; the academic skills of critical thinking, systematic inquiry and effective written and oral communication; and the personal growth experiences necessary to enable graduates to use their skills for the benefit of clients. The CBB program also seeks to adapt counseling skills to the needs of different populations so as to train truly competent multicultural counselors. The responsibility students assume for their own education helps them develop the proficiencies they will need to become effective social justice change agents in schools, colleges, and/or social service agencies.

The program is called “community based” because it has always been held off campus, in the heart of two of San Diego’s multiethnic neighborhoods and because it creates a learning community in which a team of faculty and a carefully selected group of students “partner” in the learning process, each cohort of students helping to structure its learning experience. It is a “block” program because all classes are required of all students, who stay together as a group for the entire year.

1. Prerequisite: Admission to the Department of Counseling and School Psychology (see Counseling and School Psychology section of this bulletin).

2. ED 690 Methods of Inquiry (3)

3. Core program (minimum of 15 units):

   a. Common Core (3 units):

      | Course               | Units |
      |----------------------|-------|
      | CSP 600              | 3     |
      | CSP 600L             | 1     |
      | CSP 600              | 2     |

   b. Foundations (minimum of 6 units):

      | Course               | Units |
      |----------------------|-------|
      | CSP 603              | 2     |
      | CSP 606              | 3     |
      | CSP 607              | 3     |

   c. Theory, Research, and Techniques (minimum of 6 units):

      | Course               | Units |
      |----------------------|-------|
      | CSP 610A             | 1     |
      | CSP 610B             | 1     |
      | CSP 610C             | 1     |

   d. Electives (6-9 units): Selected in consultation with adviser and may include courses listed above.

   e. Research (3-6 units):

      | Course               | Units |
      |----------------------|-------|
      | ED 799A              | 3     |
      | ED 795A              | 3     |

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 candidate must complete an application for admission to both the university and the postsecondary education specialization program. All applications should include at least two letters of recommendation. All
applicants should note that academic degree and experience required varies with the career goal of the student. Upon admission to the university and the department, all students will discuss the degree curriculum with the graduate adviser during the first semester in the program. Only students who show reasonable promise of success in postsecondary leadership positions will be admitted to this program. In order to continue in the program, the student must demonstrate ongoing academic, professional and personal growth.

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

A minimum of 30 units to include:

1. Core program:
   - ARP 610 Educational Leadership (3)
   - ARP 747 Educational Leadership in a Diverse Society (3)

2. Six to nine units selected, with the approval of the graduate adviser, from the following:
   - ARP 611 Program Development and Evaluation in Postsecondary Education (3)
   - ARP 631 Seminar in Teaching in Postsecondary Education (3)
   - ARP 680 Seminar in Administration, Rehabilitation and Postsecondary Education (3)
   - ARP 720 Human Resource Development in Postsecondary Education (3)
   - ARP 727 Emerging Issues in Postsecondary Educational Leadership (3)
   - ARP 730 Seminar in Adult Learning (3)
   - ARP 740 Advanced Seminar in Administration, Rehabilitation and Postsecondary Education (3)
   - ARP 755 Governance and Policy Development in Postsecondary Learning Organizations (3)

3. Electives selected with the approval of the graduate adviser (6-9 units).

4. ED 690 Methods of Inquiry (3)

5. Research: Three to six units selected from the following:
   - ED 791A Evaluation Techniques (3)
   - ED 791B Practicum: Evaluation (1-3) or Seminar (3-3) or Thesis (3) Cr/NC/RP
   - ED 795A-795B Seminar (3-3) or Thesis (3) Cr/NC/RP
   - 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 program. All applications should include at least two letters of recommendation. All applicants should note that academic degree and experience required varies with the career goal of the student. Upon admission to the university and the department, all students will discuss the degree curriculum with the graduate adviser during the first semester in the program. Only students who show reasonable promise of success in student affairs leadership positions will be admitted to this program. In order to continue in the program, the student must demonstrate ongoing academic, professional, and personal growth.

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

A minimum of 30 units to include:

1. Core program:
   - ARP 610 Educational Leadership (3)
   - ARP 620 Student Affairs in Higher Education (3)

2. Nine to 12 units selected, with the approval of the graduate adviser, from the following:
   - ARP 621 Theoretical Foundations of Student Affairs (3)
   - ARP 622 Communication and Group Process in Student Affairs Leadership (3)
   - ARP 623 Seminar: Critical Leadership Issues in Student Affairs (3)
   - ARP 680 Seminar in Administration, Rehabilitation and Postsecondary Education (3)
   - ARP 727 Emerging Issues in Postsecondary Educational Leadership (3)
   - ARP 730 Seminar in Adult Learning (3)
   - ARP 740 Advanced Seminar in Administration, Rehabilitation and Postsecondary Education (3)
   - ARP 747 Educational Leadership in a Diverse Society (3)
   - ARP 760 Internship in Postsecondary Educational Leadership (2-6) Cr/NC/RP

3. ED 690 Methods of Inquiry (3)

4. Research: Three to six units selected from the following:
   - ED 791A Evaluation Techniques (3)
   - ED 791B Practicum: Evaluation (1-3) or Seminar (3-3) or Thesis (3) Cr/NC/RP
   - ED 795A-795B Seminar (3-3) or Thesis (3) Cr/NC/RP

**Educational Leadership: Specialization in PreK-12**

(Major Code: 08271)

The Master of Arts degree in education with a concentration in educational leadership and a specialization in PreK-12 is intended for students pursuing administrative posts in PreK-12 educational organizations, including school business managers. Students who intend to pursue administrative careers in California public schools, grades PreK-12 need to obtain the Preliminary Administrative Services Credential and then the Professional Administrative Services Credential. Students in the PreK-12 specialization may earn a degree without earning a California Preliminary Services Credential or in combination with the credential.

To apply for admission into the PreK-12 specialization, a student must complete an application for admission to both the university and the Department of Educational Leadership. All applications should include two letters of recommendation from two supervisory administrators. Upon admission to the university and the program, all students will discuss the degree curriculum with the graduate adviser during the first semester in the program.

Specific Requirements for the Master of Arts degree in Education with a Concentration in Educational Leadership and a Specialization in PreK-12 Educational Leadership.

A minimum of 30 units to include:

1. Core program: Six units
   - EDL 600 Principles of Educational Administration (3)
   - EDL 610 Educational Leadership in PreK-12 Educational Organizations (3)

2. Six to nine units selected, with the approval of the graduate adviser, from the following:
   - EDL 630 Curriculum Design and Management (3)
   - EDL 652 Seminar in Instructional Improvement and Evaluation (3)
   - EDL 655 Communication, Problem Solving, and Decision Making in PK-12 (3)
   - EDL 680 Seminar in PreK-12 Educational Administration (3) Cr/NC

3. Electives selected with the approval of the graduate adviser (6-9 units).

4. ED 690 Methods of Inquiry (3)

5. Research: Three to six units selected from the following:
   - EDL 791A Evaluation Techniques (3)
   - EDL 791B Practicum: Evaluation (1-3) or Seminar (3-3) or Thesis (3) Cr/NC/RP
   - EDL 795A-795B Seminar (3-3) or Thesis (3) Cr/NC/RP

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

Specific Requirements for the Preliminary Administrative Services Credential: (Credential Code: 00501)

Successful completion of the credential requirements will qualify candidates for an EDL departmental recommendation for the California Preliminary Administrative Services Credential (PASC).

Admission Requirements: Candidates must be admitted to SDSU and to the Department of Educational Leadership. Admission to the Department of Educational Leadership requires that students possess a master’s degree in education or related field from an accredited university or be concurrently enrolled in a master’s degree program; have three years of teaching, pupil personnel service, librarian, or social work experience, have passed the CSEST, have met a computer literacy requirement; have two letters of recommendation from supervisory administrators and presently be working in a PreK-12 teaching environment in southern San Diego County where they can accomplish the needed fieldwork/practicum experiences.

Required courses (28 units):
EDL 600 Principles of Educational Administration (3)
EDL 610 Educational Leadership in PreK-12 Educational Organizations (3)
EDL 630 Curriculum Design and Management (3)
EDL 640 Educational Leadership in School Community Relations (3)
EDL 652 Seminar in Instructional Improvement and Evaluation (3)
EDL 655 Communication, Problem Solving, and Decision Making in PK-12 (3)
EDL 660 Field Experience in Educational Leadership (10) Cr/NC/RP

Students must maintain a minimum grade point average of 3.0 in all credential coursework with no less than a grade of C+ in any course. Only three units of coursework with a grade of C+ will count towards the certificate. A maximum of three units of coursework can be repeated.

Specific Requirements for the Professional Administrative Services Credential: (Credential Code: 00502)

Candidates pursuing the Professional Administrative Services Credential must be in a credentialed administrative position. The candidate must complete the credential program within five years of initial appointment to an administrative position.

The following are required for admission to the Professional Administrative Services Credential program:
1. An application for admission to the program.
2. Admission to Ed.D. in Educational Leadership, Concentration in PreK-12 School Leadership at San Diego State University.
3. Possession of a valid Preliminary Administrative Services Credential or a Clear Administrative Services Credential.
4. Possession of a master’s degree in Educational Leadership or another field related to educational practice.
5. Two letters of recommendation from knowledgeable field references.
6. A letter of formal commitment of participating school district to support field experience requirement.
7. Minimum grade point average of 3.0 in graduate study.
8. A selection interview with program area faculty members.

Program

The program requirements for the Professional Administrative Services Credential are:
EDL 680 Seminar in PreK-12 Educational Administration: Leadership Development (Cr/NC) 2
EDL 760 Practicum in PreK-12 Educational Organizations (Cr/NC/RP) 3
Electives selected with approval of adviser from Ed.D. in Educational Leadership, Concentration in PreK-12 School Leadership 0-6

Issuance of the Professional Administrative Services Credential requires completion of two years of successful, full-time, K-12 administrative experience earned while holding the Preliminary Administrative Services Credential.

Educational Research
(Major Code: 08241) (SIMS Code: 331928)

The Master of Arts degree in education with a concentration in educational research is designed to prepare students having a basic background in education to conduct measurement, research, and evaluation activities at a professional level. Emphasis is upon preparation for research activities at the school district level.

1. Prerequisite: A basic background in education (a minimum of 12 units of professional education) including at least one course in tests and measurement.
2. ED 690 Methods of Inquiry (3 units).
3. Core program (9 units): Policy Studies in Language and Cross-Cultural Education 612; Teacher Education 646; and three units of educational research design selected with the approval of the adviser.
4. Electives (15 units) selected with adviser’s approval.
5. ED 799A Thesis (3 units) Cr/NC/RP

Educational Technology
(Major Code: 08992) (SIMS Code: 331937)

The Master of Arts degree in education with a concentration in educational technology enables students to prepare for careers as instructional technologists, educational specialists, instructional designers, trainers, and experts in educational computing. State-of-the-art coursework and internships in companies, agencies and schools prepare candidates to analyze performance problems and design, develop and evaluate instructional strategies and products. Students graduate with a portfolio including educational computer software, video, multimedia, print and web-based materials. For further information, see the coordinator of educational technology. Course requirements follow:

1. Prerequisite: Varies with the career goal of the student. Students use educational technology skills in settings as diverse as the schools, museums, multimedia companies, and corporate training programs. For most students, Educational Technology 540 and 541 are prerequisites. See adviser.
2. ED 690 Methods of Inquiry (3 units).
3. Core program (15 units): The core is composed of courses in education and related fields, selected with the approval of the adviser on the basis of the student’s interests and goals. A minimum of nine units must be taken in courses at the 600 and 700 level.
4. Electives (6-9 units) selected with the approval of the adviser.
5. Research (3-6 units)
ED 791A Evaluation Techniques (3)
ED 791B Practicum: Evaluation (1-3) or ED 795A-795B Seminar (3-3 units) or ED 799A Thesis (3 units) Cr/NC/RP

Specialization in Educational Computing within Educational Technology Concentration
(Major Code: 08992) (SIMS Code: 331939)

Students specializing in educational computing must include among their 15 core units Educational Technology 540 and 572. Recommended electives to be approved by the program adviser include Educational Technology 561, 596, 670, 671, 684, 775, and Special Education 650. Specialization prerequisites are Educational Technology 540 and 541.

Specialization in Workforce Education and Lifelong Learning
(Major Code: 08992) (SIMS Code: 331941)

This specialization will allow students to prepare themselves as professionals who will focus on the development of education and training programs for youth and adults who are traditionally undereducated, non-college educated and who work in non-management jobs.

Students specializing in Workforce Education and Lifelong Learning pursue the following program: Prerequisites are Educational Technology 540 and 541. Required courses included in the 15 unit core are Educational Technology 544, and Administration, Rehabilitation and Postsecondary Education 565. Recommended electives to be
approved by the program adviser may include: Educational Technology 572, 640, 650, 670, 684, 685; Administration, Rehabilitation and Post-secondary Education 631, 730, 747; Policy Studies in Language and Cross-Cultural Education 601, 612; Teacher Education 631, 639.

Elementary Curriculum and Instruction
(Major Code: 08021) (SIMS Code: 331946)
The Master of Arts degree in education with a concentration in elementary curriculum and instruction is designed to increase professional competence in the form of more breadth, depth, and technical skill in curriculum and instruction, either generally or in selected areas of specialization.

1. Prerequisite: A basic background in education (minimum of 12 units), preferably holds a credential from California or certified to teach in another state. Coursework to include curriculum and methods, growth and development, educational psychology, and history and philosophy of education.

The School of Teacher Education will consider a letter of petition from individuals without professional units or a California teaching credential with equivalent experience related to the field of education.

2. Education 690, Methods of Inquiry (3 units).

3. Core program (15 units): The core is composed of courses in education and related fields, selected with the approval of the adviser on the basis of the student's interests, professional needs and goals. The core program will include:
   a. Teacher Education 600, Curriculum Development in Education (3 units); or related course with approval of adviser.
   b. Teacher Education 626, Advanced Educational Psychology; or Teacher Education 655, Sociocultural Foundations of American Education; or Teacher Education 656, Struggle for the American Curriculum; or related course with approval of adviser.
   c. Teacher Education 610A, Seminar in Mathematics Education – Elementary School; or Teacher Education 610C, Seminar in Science in Elementary Education; or Teacher Education 630, Seminar in Literacy and Language Arts; or Teacher Education 631, Seminar in Language Arts; or related course with approval of the adviser (3 units).
   d. 500/600/700-numbered courses in teacher education with the approval of the adviser (3-6 units).
   e. 500/600/700-numbered courses in education or related fields selected with the approval of the adviser (up to 6 units).

4. Electives (6-9 units) selected with the approval of the adviser.

5. Special Study and Research (3-6 units): Education 791A-791B Evaluation (3-1 units); or Education 795A-795B Seminar (3-3 units); or Education 799A, Thesis (3 units) Cr/NC/RP.

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

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

Mathematics Education (K-8)
(Major Code: 17012)
The Master of Arts degree in education with a concentration in K-8 mathematics education is designed to provide teachers a deeper understanding of issues in learning and teaching mathematics in grades K-8, and increased knowledge of current trends, research, and assessment in mathematics education. Students can expect to acquire new perspectives and skills about mathematics teaching, specialized knowledge of children's mathematical understanding, and preparation for leadership among teachers in mathematics teaching.

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

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

3. Electives (9 units): With the approval of the adviser, select three courses from the following:
   PLC 553 Language Assessment and Evaluation in Multicultural Settings (3)
   PLC 601 Language Policies and Practices (3)
   EDTEC 540 Educational Technology (3)
   EDTEC 541 Educational Web Development (3)
   EDTEC 570 Advanced Teaching with Technologies (3)
   EDTEC 572 Technology for Course Delivery (3)
   MTHED 604 Seminar on Teaching Issues in Mathematics (3)
   MTHED 605 Algebra in the 7-14 Curriculum (3)
   MTHED 606 Selected topics in 7-14 Mathematics Curriculum (3)
   TE 610A Seminar in Mathematics Education – Elementary School (3)
   TE 790 Seminar in Teacher Education (3)

Or three units of a 500- or 600-level course approved by the program coordinator.

4. Research (9 units):
   ED 690 Methods of Inquiry (3)
   ED 795A Seminar (3)
   ED 795B Seminar (3)

Policy Studies in Language and Cross-Cultural Education
(Major Code: 08994) (SIMS Code: 331955)
The Master of Arts degree in education with a concentration in policy studies in language and cross-cultural education is designed to provide special knowledge and training for two diverse audiences with different career goals. Plan 1, curriculum and critical pedagogy, is geared for the classroom teacher or resource specialist who will be working directly with language minority students. Plan 2 has been developed to allow students to specialize in areas outside of the Department of Policy Studies in Language and Cross-Cultural Education. The nine unit specializations may be in other College of Education departments or in departments across campus, with permission of the department adviser and the cooperating department. This allows for career options in a variety of settings with an emphasis in a noneducational discipline, to provide classroom teachers, researchers, and other specialists with a different orientation in examining policy research.

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

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

Research: 9 units total.
   ED 690 Methods of Inquiry (3) and
   ED 795A-795B Seminar (6) or
   ED 799A Thesis (3) Cr/NC/RP and
   ED 797 Research (3) Cr/NC/RP
Plan I: Curriculum and Critical Pedagogy Specialization

**Core:**
- PLC 600A Foundations of Democratic Schooling (3) or PLC 600B Foundations of Dual Language Programming for Critical Biliteracy Development (3)
- PLC 601 Language Policies and Practices (3)
- PLC 650 Curriculum Development for Urban School Communities (3)

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

**Plan II: Outside Specialization**

**Core:**
- PLC 600A Foundations of Democratic Schooling (3) or PLC 600B Foundations of Dual Language Programming for Critical Biliteracy Development (3)
- PLC 601 Language Policies and Practices (3)
- PLC 650 Curriculum Development for Urban School Communities (3)

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

**Reading Education**

(Major Code: 08301) (SIMS Code: 331964)

The Master of Arts degree in education with a concentration in reading education is designed to provide increased knowledge and skill for those who are or wish to become reading/language arts specialists in public or private schools and clinics. The program prepares candidates to teach, tutor, develop curriculum, offer in-service instruction and administer reading centers for students ranging from kindergarten through 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. Prerequisite: 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 634 Seminar in Research Investigations in Reading and Language Arts (4)
- TE 635 Assessment of Reading and Language Arts (3)
- TE 636 Advanced Assessment of Reading and Language Arts (3)
- TE 637 Instructional Strategies for Reading and Language Arts (4)
- TE 639 Literacy and Language (3) or TE 677 Research Based Pedagogy for Diverse Learners (3)

- TE 640 Planning for Teaching and Assessment in Writing (3)
- 3. ED 795A-795B Seminar (3-3) or ED 799A Thesis (3) Cr/NC/RP and Electives (3)

**Secondary Curriculum and Instruction**

(Major Code: 08031) (SIMS Code: 331973)

The Master of Arts degree in education with a concentration in secondary curriculum and instruction, is designed as the base for applicants to increase professional competence in any of the fields typically taught in secondary schools, and for obtaining those competencies and technical skills in curriculum and instruction either generally, or in selected areas of specialization.

1. Prerequisite: A basic background in education (12 units), preferably holds a credential from California or certified to teach in another state. The School of Teacher Education will consider a letter of petition from individuals without professional units or a California teaching credential with equivalent experience related to the field of education.

2. ED 690 Methods of Inquiry (3 units)

3. Core program (6 units): to include TE 600, Curriculum Development in Education (3 units); three units from TE 604, Advanced Problems in Instruction; or TE 655, Sociocultural Foundations of American Education; or TE 656, Struggle for American Curriculum; or related courses with approval of adviser.

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

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

**Special Education**

(Major Code: 08081) (SIMS Code: 331982)

The Master of Arts degree in education with a concentration in special education provides the professional educator with advanced knowledge and skills in special education. This degree has many requirements in common with the Level II Education Specialist Credentials in Special Education and may be earned concurrently with those credentials. The M.A. degree can include specializations in the following areas: autism, early childhood, developing gifted potential, mild/moderate disabilities, moderate/severe disabilities, resource specialization, severely emotionally disturbed/behaviorally disordered, teaching low achieving students in the mainstream, and school to adult transition. All programs must be approved by the graduate adviser. Although the M.A. degree is usually linked to a teacher credential, it is open to individuals with undergraduate degrees in a wide range of disciplines in consultation with the graduate adviser.

**Specialization in Autism**

(Major Code: 08081) (SIMS Code: 331994)

Prerequisites: Special Education 527 or Basic California Teaching Credential with EEL endorsement/CLAD/BCLAD credential and Special Education 553.

Core (10-13 units): Special Education 651, 655, 654, 771; Education 690.

Advanced Specialization (10-13 units): Special Education 510, 605, or units selected from approved coursework in specialization area, 676, 681 (in section approved by adviser), and electives selected with approval of adviser.

Culminating Experience (6 units): Education 795A-795B.

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 Developing Gifted Potential  
(Major Code: 08081) (SIMS Code: 331991)  
Core (15 units): Special Education 644, 771, and nine units selected with approval of adviser.

Related Fields (6-9 units 500-level or above) by advisement or Advanced Specialization (6 units): Special Education 650 and three units of electives selected with approval of adviser.

Research (6-9 units): Education 690* and Education 791A, 791B; or 795A*-795B*; or 799A.

Specialization in Early Childhood  
(Major Code: 08081) (SIMS Code: 331983)  
Prerequisites: Special Education 500, 527 or Basic California Teaching Credential with EEL endorsement/CLAD/BCLAD credential, Special Education 528; or Special Education 527 and Preliminary or Professional California credential in Early Childhood Special Education.

Core (12 units): Education 690*; Special Education 655; six units selected from approved coursework in specialization area.

Advanced Specialization: Special Education 681 – 3 units (in section approved by adviser) and 9-12 units selected from approved electives at 500-level or above.

Culminating Experience (3-6 units): Education 795A*-795B* or Education 791A, 791B or Education 799A.

Specialization in Mild/Moderate Disabilities  
(Major Code: 08081) (SIMS Code: 331992)  
Prerequisites: Special Education 500, 524, 527 or Basic California Teaching Credential with EEL endorsement/CLAD/BCLAD credential; or Special Education 527 and Preliminary or Professional California credential in Mild/Moderate Disabilities.

Core (12 units): Education 690* and nine units selected from approved coursework in specialization area.

Advanced Specialization: Special Education 681 – 3 units (in section approved by adviser) and 9-12 units selected from approved electives at 500-level or above.

Culminating Experience (3-6 units): Education 795A*-795B* or Education 791A, 791B or Education 799A.

Specialization in Moderate/Severe Disabilities  
(Major Code: 08081) (SIMS Code: 331993)  
Prerequisites: Special Education 500, 525, 527 or Basic California Teaching Credential with EEL endorsement/CLAD/BCLAD credential; or Special Education 527 and Preliminary or Professional California credential in Moderate/Severe Disabilities.

Core (12 units): Education 690* and nine units selected from approved coursework in specialization area.

Advanced Specialization: Special Education 681 – 3 units (in section approved by adviser) and 9-12 units selected from approved electives at 500-level or above.

Culminating Experience (3-6 units): Education 795A*-795B* or Education 791A, 791B or Education 799A* in departmentally approved sections.

Specialization in Vocational Transition  
(Major Code: 08081) (SIMS Code: 331990)  
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, 687; and 3-6 units of approved electives at the 600 or 700 level.

Culminating Experience (3-6 units): Education 795A*-795B* or Education 791A, 791B or Education 799A.*

Master of Arts in Teaching Degree

Admission to the Degree Curriculum

Applicants must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. An applicant may apply nine units of post-baccalaureate teacher credential work from an accredited institution to the Master of Arts in Teaching (MAT) degree. Teachers wishing to participate in this program who have not completed a post-baccalaureate teaching credential from an accredited institution may still apply to the program by providing evidence of a valid teaching credential from an accredited institution, in addition to fulfilling the other admission requirements, and taking nine additional units of adviser-approved post-baccalaureate MAT coursework. It is recommended that the coursework for the MAT begin within five years of completion of the basic teacher credential program. In order to be awarded credit for the nine post-baccalaureate credential units in the MAT, these units, along with the course of study units, cannot be more than seven years old at the time of completion of the MAT.

Advancement to Candidacy

A student desiring a Master of Arts in Teaching degree may be advanced to candidacy upon completion of 15 units to include TE 600, Curriculum Development in Education (3); TE 677, Research-based Pedagogy for Diverse Learners (3); TE 693, Measuring and Assessing Student Achievement in Schools (3); and two courses in the student’s area of concentration.

Specific Requirements for the Master of Arts in Teaching Degree

(Major Code: 08292)

All candidates for the MAT will be required to take a comprehensive examination. This written examination is designed to evaluate achievement in the specific area of the student’s concentration. A student is eligible to take the comprehensive examination only after advancement to candidacy. The examination will be offered near the midpoint 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 comprises of courses in research, curriculum development, and educational assessment. The core includes:
   a. TE 600 Curriculum Development in Education (3)
   b. TE 677 Research-Based Pedagogy for Diverse Learners (3)
   c. TE 693 Measuring and Assessing Student Achievement in Schools (3)
   d. TE 777 Action Research in Learning Environments (3)
Education

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, cognitive disabilities, mental health, career assessment, rehabilitation programs, disability management, diversity program development and work within the public and private sectors. The degree is accredited by the Commission on Rehabilitation Education (CORE). A limited number of graduate stipends from the Rehabilitation Services Administration are available to (1) students who are committed to entering rehabilitation in publicly supported programs after graduation, and (2) students with a financial need. Graduates qualify for CRC certification and with additional coursework, can be eligible for California licensure as a professional counselor. A limited number of students may qualify for admission to the Pupil Personnel Services – School Counseling Credential track, under a collaborative agreement with the Department of Counseling and School Psychology. Specializations and certificate programs are available in Cognitive Disabilities, Psychiatric Rehabilitation, and Rehabilitation Technology.

**Admission to the Degree Curriculum**

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

Students seeking admission to the graduate program which leads to a Master of Science degree in rehabilitation counseling should address their inquiries to the coordinator of the program. Detailed instructions concerning application procedures are available at [http://www.interwork.sdsu.edu/arpe/](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:

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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 advisor.

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 advisor 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 major should refer to this section on M.A. in Education Counseling. The following departmental courses may be open to students who have not been accepted into a program and are interested in exploring departmental offerings: Counseling and School Psychology 300, 400, 401, 420, 450, 460, and 600 with 600L. See the department Web site at http://edweb.sdsu.edu/csp/.

Financial Assistance

The department sponsors the Counseling and School Psychology Loan Fund honoring Professors Leonard Strom and John Schmidt which along with other university-wide programs, is administered by the Office of Financial Aid and Scholarships. The department offers the Gertrude Bell scholarship to one first year student accepted to one of the four programs. Other forms of financial assistance administered by the university are presented elsewhere in this bulletin.

Admission to the Degree Curriculum

Applications for the M.S. in counseling with a concentration in school counseling or marriage and family therapy are considered only once a year. Applications are accepted between November 1 and February 1. We urge you to apply early. For detailed instructions on application procedures, applicants should consult the Web site http://edweb.sdsu.edu/csp/ or contact the program director through the Department of Counseling and School Psychology, College of Education, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182-1179.

Applicants must submit separate applications to the university Graduate Admissions and to the program. Applicants receive separate notifications of application status for each application. No minimum set of qualifications in any way guarantees admission. Admission to the university does not guarantee recommendation for admission from the program. The program admissions committee makes the recommendations for admission to the department faculty and chair who makes the final recommendation to the university Graduate Admissions. Submitted application materials may not be returned or forwarded to other academic units.

The admissions process for each program is comprised of (1) a review of written application materials that include a program application, academic transcripts, GRE scores, personal statements, three letters of recommendation, a resume, and CBEST scores (for school counseling only) and (2) a group interview process that includes a variety of small and large group interactive experiences. Assessment for admission is based on four categories of readiness: academic, interpersonal, multicultural, and preprofessional.

Applicants who wish to apply to more than one concentration (program) must apply separately to each program. They will be considered through the program's specific admissions review process. Applicants accepted to more than one program may not dually enroll in school counseling, school psychology, and marriage and family therapy.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy, as described in Part Four of this bulletin and be recommended by the faculty. A student may be advanced to candidacy when the official program for the Master of Science degree has been filed and after having earned a minimum grade point average of 3.0 in at least 24 units listed on the official program.

Specific Requirements for the Master of Science Degree in Counseling

(Major Code: 08261) (SIMS Code: 331001)

In addition to meeting the requirements for admission to the university with classified graduate standing, the student must satisfy the basic requirements for the master's degree described in Part Four of this bulletin. In addition, the student must meet the requirements specified below.

Selection of Plan A or Plan B

The selection of Plan A, the thesis or project, or Plan B, the comprehensive examination plan, is made in consultation with the adviser at the time the official program of study is filed. Plan A thesis is designed for students who have a particular research problem they wish to investigate in some detail. The Plan A project is expected to be a rigorous application of research and theory in a professional endeavor. The comprehensive examination option for Plan B requires demonstration of the integration and application of theory, research, and techniques. It is expected that the student will take the comprehensive examination concurrently with or following enrollments...
Course Requirements

Students are expected to consult with their adviser prior to taking any coursework leading to the master's degree. Selections of courses have been designated for the concentrations and must be reviewed with the adviser.

The student must complete a minimum of 60 units of 500-, 600-, 700-numbered courses, including:

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

2. Foundations (a minimum of 9 units):
   - CSP 601 Theoretical Foundations of Counseling and Marriage and Family Therapy (3)
   - CSP 610A Determinants of Human Behavior: Personality (1-3)
   - CSP 610B Determinants of Human Behavior: Social and Cultural (1-3)
   - CSP 610C Determinants of Human Behavior: Development (1-3)
   - CSP 610D Determinants of Human Behavior: School Learning (1-3)
   - CSP 610E Determinants of Human Behavior: Biological (1-3)
   - CSP 615 Seminar in Multicultural Dimensions in Counseling (3)

3. Theory, Research, and Techniques (a minimum of 12 units):
   - CSP 622A Ecosystems Assessment – Intervention I: Students (3)
   - CSP 622B Ecosystems Assessment – Intervention II: Schools (3)
   - CSP 623 Ecobehavioral Assessment – Intervention (3)
   - CSP 625 Theories of Marriage and Family Therapy I (3)
   - CSP 625L Marriage and Family Therapy Theories in Practice I (1)
   - CSP 640 Testing and Assessment for Marriage and Family Therapists (2)
   - CSP 662 Counseling Interventions with Children and Adolescents (3)
   - CSP 670 Theory and Process of Group Counseling (3)
   - CSP 680 Theory and Process of Consultation (3)

4. Integration and Application of Theory, Research, and Techniques (a minimum of 6 units):
   - CSP 730 Fieldwork in Counseling (2-6) Cr/NC
   - CSP 740 Practicum: Individual Counseling (3) Cr/NC
   - CSP 741 Practicum: Group Counseling (3) Cr/NC
   - CSP 755 Practicum I: Marriage and Family Therapy (3) Cr/NC
   - CSP 765 Practicum II: Marriage and Family Therapy (3) Cr/NC
   - CSP 780 Internship (2-12) Cr/NC
   - CSP 785 Marriage and Family Therapy Traineeship (1-10) Cr/NC

5. Research (a minimum of 3 units):
   - CSP 710A Professional Seminar (3) or CSP 799A Thesis (3) Cr/NC/RP

6. Electives: 24 units selected with adviser's approval.

Concentration in Marriage and Family Therapy

(Major Code: 08261) (SIMS Code: 331006)

The Master of Science in counseling with a concentration in marriage and family therapy is designed to prepare students for practice in the field of marriage and family therapy. The student must complete, in consultation with an adviser, an official program of study that includes a minimum of 60 units of 600- and 700-numbered required and elective courses. To fulfill the educational requirements to qualify for California state licensure in marriage and family therapy, as published by the Board of Behavioral Sciences Laws and Regulations relating to the practice of Marriage and Family Therapy, Licensed Social Work, and Licensed Educational Psychologists, article 4980.40, students must complete an additional two to ten units, depending on the students' 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 680 Cross-Cultural Counseling Communication Skills (2)
   - CSP 680L Cross-Cultural Counseling Prepracticum (1) Cr/NC

4. Integration and Application of Theory, Research, and Techniques (minimum 22 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
   - CSP 799A Thesis (3) Cr/NC/RP

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.

Education

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.
4. Integration and Application of Theory, Research, and Techniques (minimum 9 units):
   CSP 755 Practicum I: Marriage and Family Therapy (3) Cr/NC
   CSP 765 Practicum II: Marriage and Family Therapy (3) Cr/NC
   CSP 785 Marriage and Family Therapy Traineeship (1-10) Cr/NC
   All students must minimally complete CSP 755, 765, and three units of CSP 785. Students’ pacing of their clinical experience will vary. Therefore, students will register for additional units of CSP 785 as needed to insure oversight and supervision of all clinical hours of experience.

5. Additional requirements for the concentration (minimum 9 units):
   CSP 606A Professional Issues in Mental Health Practice: Marriage and Family Therapy (3)
   CSP 618 Contexts of Psychopathology (3)
   CSP 635 Sexuality and Intimacy in Couple and Family Therapy (2)
   CSP 687 Family Treatment of Substance Abuse (1)
   CSP 688 Family Systems Assessment of Child Abuse (1)
   CSP 691 Violence in Couples Relationships (1)
   CSP 694 Psychopharmacology for Marriage and Family Therapists (2)

6. Research (3-6 units):
   CSP 710A Professional Seminar (3)
   CSP 710B Professional Seminar (3)
   OR
   CSP 799A Thesis (3) Cr/NC/RP

   For Plan B, CSP 710A and CSP 710B form the capstone experience of the program. Students are required to complete a master’s project as part of the requirements of CSP 710A. In CSP 710B, students complete a theory integration paper and a comprehensive examination during their final semester of the program. In special circumstances, a student may elect to take the thesis option (Plan A).

7. Electives (0-3 units)
   CSP 689 Family Counseling in the Schools (1)
   CSP 741 Practicum: Group Counseling (3) Cr/NC
   or as selected in consultation with the adviser:
   CSP 770 Advanced Seminar in Counseling (3)

   Adherence to the Laws and Regulations Relating to the Practice of Marriage and Family Therapy issued by the Board of Behavioral Sciences, the Code of Ethics of the American Association for Marriage and Family Therapy, and the Code of Ethics of the California Association of Marriage and Family Therapists is mandatory. Students who knowingly or unknowingly violate any part of the laws or ethical code may be dismissed from the program without further qualification regardless of coursework completed or other academic achievement.

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/).

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**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:
   a. Admission to the university and the Department of Counseling and School Psychology for concentrated study in school counseling.
   b. Related undergraduate coursework in anthropology, child development, cultural studies, education, ethnic studies, psychology, and sociology is recommended.
   c. California Basic Educational Skills Test (CBEST) scores must be reported to the department.
   d. The student must present the Certificate of Clearance from the California Commission on Teacher Credentialing prior to beginning the sequence of study. Consult the Credentials Processing Center, EBA-250.

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

3. Foundations (minimum 6 units):
   CSP 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)

5. Integration and Application of Theory, Research, and Techniques (minimum nine units selected in consultation with adviser):
   CSP 750 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)
Education

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

Students must maintain the minimum university requirement of 3.0 GPA. Students must receive a grade of B- or better (Cr for credit/no credit graded courses) in every course to document attainment of the competencies required for the Pupil Personnel Services Credential. Students not meeting this requirement must immediately consult the department chair or the director of the school counseling concentration. In addition, three grades of B- or lower (including NC) are grounds for dismissal from the program regardless of the student's overall GPA.

Adherence to the ethical principles of the American School Counselor Association is mandatory. Students who knowingly or unknowingly violate any part of the ethical code may be dismissed from the program without further qualification regardless of coursework or other academic achievement. A copy of the ethical principles is included in the student handbook distributed at orientation.

In addition to the required courses and experiences, the student must pass all components of the CBEST to be eligible for the credential.

Section III.
Teaching and Service Credentials

Admission to Graduate Study

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

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the College of Education (refer to the appropriate degree section for the address to submit additional information).

Graduate Admissions

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

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

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

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

(2) GRE scores (http://www.ets.org, SDSU institution code 4682)
• GRE is not required for teaching credential programs;

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

Multiple Subject Bilingual 2042 Credential (Elementary K-6 Education): Spanish, Arabic, Filipino, Japanese, and Mandarin Emphasis (Credential Code: 00200)

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

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

(1) Complete department application (available at the department Web site);

(2) California Basic Educational Skills Test (CBEST) scores;

(3) Demonstration of Language and Cultural Proficiency:
• Spanish: Completion of PLC 415 or copies of CSET LOTE subtests III and V for Spanish language emphasis;
• Japanese and Mandarin: Copy of CSET LOTE subtests III and V for language of emphasis;
• Arabic and Filipino: Copy of CSET LOTE subtests II and V for language of emphasis;

(4) TB test results;

(5) Three letters of recommendation, one of which must be from an elementary teacher if multiple subject or from a secondary teacher if single subject;

(6) Verification of early field experience (30 hours for multiple subject) or completion of PLC 415;

(7) Certificate of clearance (live scan);

(8) CPR that includes infant/child/adult;

(9) Autobiography/Goals and Philosophy. Candidates must complete a 1-1/2 page essay of their goals and philosophy in education and a 1-1/2 page autobiography in language of emphasis and English. Submit original and four sets of each essay with your PLC application;

(10) California Subject Examination for Teachers (CSET) scores;

(11) $25 application processing fee.

Single Subject Bilingual 2042 Credential (Secondary Education Grades 7-12: Spanish Emphasis (Credential Code: 00100)

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

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

(1) Department application (available at the department Web site);

(2) California Subject Examination for Teachers (CSET) scores or adviser recommendation;

(3) California Basic Educational Skills Test (CBEST) scores;

(4) Demonstration of Language and Cultural Proficiency:
• Spanish: Completion of PLC 415 or copies of CSET LOTE subtests III and V for Spanish language emphasis;

(5) TB verification;

(6) Three letters of recommendation, one of which must be from an elementary teacher if multiple subject or from a secondary teacher if single subject;

(7) Verification of early field experience (45 hours for single subject) or completion of PLC 415;

(8) Certificate of clearance (live scan);

(9) CPR that includes infant/child/adult;

(10) Autobiography/Goals and Philosophy. Candidates must complete a 1-1/2 page essay of their goals and philosophy in education and a 1-1/2 page autobiography in language of emphasis and English. Submit original and four sets of each essay with your PLC application;

(11) $25 application processing fee.
Reading/Language Arts Specialist Credential  
(Credential Code: 00410)

The following materials should be mailed or delivered to:
School of Teacher Education  
(Attention: Pamela J. Ross)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1153

(1) Department application (paper only);  
(2) Personal statement;  
(3) Three letters of reference on official letterhead.

Education Specialist Credentials in Special Education

The following materials should be mailed or delivered to:
Department of Special Education  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92108-1170

(1) Department application packet.

General Information

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

The College of Education has obtained approval for programs leading to the following credentials:

<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 (2042) Bilingual: Spanish**, Arabic, Filipino, Japanese, or Mandarin</td>
<td>Teach in self-contained classrooms 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 (2042) 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>
<tr>
<td>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</td>
<td>Teach special education students in the programs designated by each education specialist credential.</td>
</tr>
</tbody>
</table>

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

Education Specialist Credentials*  
Specialist Credentials  
Reading/Language Arts  

Service Credentials

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

Specialist Certificates

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

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

Information Applicable to Multiple Subject and Single Subject (SB 2042/Bilingual) Credentials

Departmental admission to Multiple Subject or Single Subject (SB 2042) credential program does not constitute admission to the university. Candidates who are entering the university for the first time, or who have graduated or who are graduating, and are planning to re-enroll for the credential program must file a separate application for admission to the university during the regular university application period.

Students Who Seek to Complete a Credential

Teachers with Preliminary Ryan Multiple Subject or Single Subject credentials who are working toward Professional Clear certification may have individual programs designed to meet their needs and interest areas. Arrangements for evaluation of college credit and program design can be made through the Credentials Processing Center, EBA-259, 619-594-5964.
A student transferring into San Diego State University to complete requirements for either the Preliminary Multiple Subject or Single Subject credential must complete a minimum of six units of professional education coursework in residence at SDSU in order to be recommended for certification regardless of the extent of education work completed at other institutions. The student will also be held responsible for successful completion of the Performance Assessment for California Teachers (PACT).

**Evaluation of Credits**

After an interval of five years, courses in education are reevaluated and subject to reduction in credit in light of new requirements and changes in educational procedures. All courses taken either at this university or elsewhere must be approved by an official adviser in order to be credited toward meeting credential requirements or pattern requirements for a degree.

**GPA Requirements For Continuation in Multiple Subject/Single Subject Credential Programs**

A grade point average of 3.0 must be maintained each semester to permit a student to continue any Multiple Subject or Single Subject credential program.

**Supplementary Authorizations**

With completion of additional units in certain curriculum areas, both Single and Multiple Subject teachers can be granted supplementary authorizations to teach in generalized areas in middle and junior high schools (e.g., Introductory English). Single subject teaching credential candidates can also be granted supplementary authorizations to teach in specialized areas K-12 (e.g., psychology). Information on requirements for these supplementary authorizations is available through the Credentials Processing Center, EBA-259.

**Multiple Subject Credential (Elementary Education)**

(Credential Code: 00200)

**Multiple Subject—Preliminary Credential**

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

1. A baccalaureate or higher degree.
2. Completion of an approved program of professional education, including student teaching and coursework in reading methods with a grade point average of 3.0 or higher.
3. Basic skills competency as demonstrated through passing scores on the California Basic Educational Skills Test (CBEST).
4. Demonstrated subject matter competency by passing the Multiple Subjects examination of the California Subject Examinations for Teachers (CSET). Must have scores taken within five years prior to recommendation.
5. Successful completion of the Performance Assessment for California Teachers (PACT).
6. Passing scores on the Reading Instruction Competence Assessment (RICA).
7. Demonstrated knowledge of the principles and provisions of the United States Constitution through successful completion of a three-unit collegiate-level course or examination. Courses are listed in General Catalog section on “Graduation Requirements,” IV. American Institutions Requirement.
8. Knowledge of health education, including substance abuse and nutrition: Public Health 101 or Teacher Education 280 or approved equivalent.
9. Demonstrated knowledge of the needs of and methods of providing educational opportunities to individuals with exceptional needs: Special Education 450 or 500.
10. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): Educational Technology 470.
11. Verify current training in cardiopulmonary resuscitation (CPR). Verification of the CPR training is made through submission of a photocopy of the card issued by the training agency. While many agencies provide CPR training, verification must be made at levels identified by the American Heart Association (AHA) or the American Red Cross (ARC). Candidates pursuing training through agencies other than these will be required to verify the level of training relative to either the AHA or ARC standards either from the data provided directly on their card or on a supplementary letter on letterhead stationery from their training agency (no phone call verifications).

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

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

Candidates for the Multiple Subject Credential Program must satisfy the standards and qualifications listed below and submit complete application packets to the School of Teacher Education, EBA-255. Contact the School of Teacher Education for application dates. Completed application packets will include items verifying satisfaction of the following:

1. **CBEST Examination.** Students must pass the California Basic Educational Skills Test (CBEST) prior to admission to the Multiple Subject credential program. Registration information and materials for the CBEST are available at [http://www.cbest.nesinc.com](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](http://www.cset.nesinc.com).
3. **Prerequisite Courses.** These courses or approved equivalents must be completed with grades of C, CR, or higher no more than seven years prior to admission to the Multiple Subject Credential Program. The courses may be in progress at the time of program application. Proof of registration is required to be considered for admission.
   a. **Education 451, “Introduction to Multicultural Education.”** This course provides an introduction to ethnicity, language, and culture in education, particularly the ways in which those factors differentially affect educational outcomes for children. The course assists in preparing teacher applicants to work with students from diverse backgrounds by examining both societal and personal belief systems and the ways that those beliefs are expressed in public school classrooms.
   b. **Teacher Education 280, “Health Education for Teachers.”** This course is a prerequisite for applicants.
   c. **Mathematics 210, “Number Systems in Elementary Mathematics.”** This course must have been taken within seven years of program application. In lieu of Mathematics 210, candidates may substitute any calculus course taken at a college or university within the past seven years with a grade of credit, C, or better.
   d. **Special Education 450, “Classroom Adaptations for Special Populations.”** This course is a prerequisite for applicants.
4. Grade Point Average. Candidates must have attained a grade point average of at least 2.67 in all baccalaureate and post-baccalaureate coursework or 2.75 in the last 60 semester (90 quarter) units attempted. Candidates are required to submit official transcripts from all colleges and universities attended and unofficial transcripts for SDSU coursework for GPA calculations.

5. Letters of Recommendation. Candidates must submit two letters of recommendation. One letter must be from a faculty member in the candidate’s major, and one from an individual who knows the candidate well (but is not related by blood or marriage) and who can comment directly on factors such as the candidate’s qualifications for a teaching career in a multicultural setting, work or educational experiences, experience teaching or supervising students or other groups of individuals, personal character, and/or potential for success as a teacher. The signed letters may be hand carried and do not need to be confidential or in sealed envelopes, but must be on letterhead stationery (name, address, and phone number of sender included). If the letters are not on letterhead, the name, address, and phone number of the sender must be typed on the letter.

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

7. California Certificate of Clearance. This certificate represents a background clearance and check conducted by the State Department of Justice and Federal Bureau of Investigation. Turnaround time for the clearance can take as long as eight months. Possessors of K-12 California credentials may satisfy this requirement by submitting copies of those certificates. Candidates must submit the application directly to the California Commission on Teacher Credentialing. A copy of the certificate prior to admission must be provided to the School of Teacher Education.

8. Early Field Experience. Candidate must successfully complete a minimum of 30 hours of observation and participation in a “regular” classroom in public elementary schools. This is documented through the Early Field Experience Guide available for downloading from the School of Teacher Education Web site at: http://coe.sdsu.edu/site/prospective/application.php. Either the original or a photocopy of the Early Field Experience Guide must be turned in as part of the application to the credential program.

9. Personal Narrative. The narrative (two copies submitted in application) should address the following items:
   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 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>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>
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</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>
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<td>EDTEC 470</td>
<td>Technologies for Teaching</td>
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<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>EDTEC 470</td>
<td>Technologies for Teaching</td>
<td>3</td>
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<tr>
<td>PLC 915A</td>
<td>Teaching and Learning in the Content Area: ELD/SDAIE: Multiple Subjects</td>
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**Semester 2**

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<th>Course Title</th>
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<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>
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<tr>
<td>TE 930</td>
<td>Teaching Reading and Language Arts in the Elementary School</td>
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**Semester 3**

<table>
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<th>Course Title</th>
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<tbody>
<tr>
<td>TE 961</td>
<td>Advanced Student Teaching Seminar (Cr/NC)</td>
<td>2</td>
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<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>
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<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>2</td>
</tr>
</tbody>
</table>

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

Multiple Subject Bilingual 2042 Credential (Elementary K-6 Education): Spanish, Arabic, Filipino, Japanese, and Mandarin Emphasis

(Credential Code: 00200)

The Multiple Subject Bilingual 2042 Credential (Elementary Grades K through 6 Education) is available for students interested in teaching in a bilingual Spanish, Arabic, Filipino, Japanese, or Mandarin elementary school classroom. This credential authorizes the holder to teach in any self-contained bilingual or regular classroom in which one teacher is responsible for all the subjects commonly taught in the elementary school. Because courses on methods of teaching subject areas are taught in Spanish, Arabic, Filipino, Japanese, or Mandarin, as well as English, candidates must meet the respective language of emphasis proficiency requirements as outlined below.

With the passage of Proposition 227, requiring all students in public schools be taught in English unless a school has received a waiver, the Policy Studies Department and the College of Education remains committed to the training of bilingual teachers. The credential remains as the most desirable credential in California. Furthermore, the university is committed with developing leaders in cultural, economic, educational, scientific, social, and technical fields, as well as addressing the linguistic diversity of school communities. The university is primarily responsive to the needs of the regional, national, and international communities it serves.

Candidates who will pursue this credential need to specify “Multiple Subject Instruction–Bilingual” in the application for graduate admission to SDSU (Code: 00200).

**Standards for Admission**

1. **CBEST.** Students must pass the California Basic Educational Skills Test prior to admission to the BCLAD credential program. This examination is required by the California Commission on Teacher Credentialing. Booklets containing registration forms and test information are available at http://www.cbtest.nesinc.com.

2. **Subject Matter Competency.** Students must verify completion of subject matter competency in diversified subjects commonly taught in self-contained classrooms prior to admission to the Multiple Subject Credential Program. To be admitted to the bilingual multiple subject credential program, a candidate shall have achieved a passing score on the California Subject Examination for Teachers (CSET) that is required for the credential sought. Registration information and materials for the CSET are available at http://www.cset.nesinc.com.
3. Prerequisite Courses. The following courses must be completed with a grade of C- or better prior to admission to the program, but may be in progress at the time of application or taken in the term immediately prior to the program start date.

**Liberal Studies Majors.**

<table>
<thead>
<tr>
<th>Units</th>
<th>PLC 515 Multilingual Education: Theory and Practice for Bilingual Teachers</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ED 451 Introduction to Multicultural Education</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>SPED 500 Human Exceptionality</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>TE 280 Health Education for Teachers</td>
<td>1</td>
</tr>
</tbody>
</table>

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

* MATH 210 Number Systems in Elementary Education | 3

*With approval of the mathematics adviser, any of the following mathematics courses may be substituted for Mathematics 210: Mathematics 121, 150, 312.

4. Grade Point Average. Candidates must have cumulative grade point averages (GPAs) within the upper one-half of undergraduate students in the candidates’ majors. GPAs vary according to discipline and graduating institution. GPA requirements are available in the Policy Studies in Language and Cross-Cultural Education Department (PLC), EBA-248. Candidates are required to submit two sets of official transcripts from all colleges and universities attended and unofficial SDSU transcripts for GPA calculations.

5. Letter of Recommendation. Two professional references and one letter of recommendation must be submitted attesting to the applicants following characteristics: (a) attitude, aptitude and ability to teach children; (b) personality and character; (c) academic ability. At least one letter should be from an elementary school teacher the student has worked with and the others may be from faculty and administrators.

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

7. Early Field Experience. Applicants must provide evidence of a minimum of 30 hours of experience with students in typical elementary classroom settings within the last three years. Evidence must be documented. Completion of PLC 415 can be used to meet this requirement.

8. Oral English and Written Statement of Professional Goals and Philosophy. Have an interview with the admissions and retention committee of the PLC Department.

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

11. Language and Culture Proficiency. All candidates must demonstrate minimum Language Proficiency and Cultural Awareness for the language of emphasis to meet their specific Bilingual Authorization.

12. Reading Instruction Competency 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>Units</th>
<th>PLC 523 Psychological Foundations for Bilingual Teachers in K-6 Classrooms</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PLC 532 Bilingual Teaching in Language Arts for Elementary Students</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PLC 902 Professional Portfolio (Cr/NC)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>PLC 910 Teaching Mathematics to Bilingual Elementary Students</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PLC 911 Teaching Social Studies to Bilingual Elementary Students</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PLC 912 Teaching Science to Bilingual Elementary Students</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PLC 915A Teaching and Learning in the Content Area: English Language Development/SDAIE: Multiple Subjects</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PLC 931 Skills in Teaching Reading to Bilingual Elementary Students</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PLC 960 Student Teaching Seminar for Bilingual Elementary Students (Cr/NC)</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>PLC 961 Student Teaching for Bilingual Elementary Students (Cr/NC)</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>PLC 962 Student Teaching for Elementary Bilingual Students II (Cr/NC)</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>ED 970 Testing Event Assessment (Cr/NC)</td>
<td>3</td>
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<tr>
<td></td>
<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. Successful completion of Language Proficiency and Cultural Awareness Requirements for Language of Emphasis.
5. Demonstrated knowledge of principles and provisions of United States Constitution through successful completion of three-unit college level course or examination. Courses are listed in General Catalog section on "Graduation Requirements," IV American Institutions Requirement.
6. Passage of California Basic Educational Skills Test (CBEST).
7. Passage of Reading Instruction Competence Assessment (RICA) Test.
8. Demonstrated knowledge of the needs of and methods of providing educational opportunities to individuals with exceptional needs: Special Education 500.
9. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): Educational Technology 470 or Special Education 580.
10. Knowledge of health education in California, including substance abuse and nutrition: Teacher Education 280 – Health Education for Teachers (1 unit) and verification of CPR competency.
11. Successful completion of the Performance Assessment for California Teachers (PACT).

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

Bilingual (Spanish) 2042 Multiple Subject and Special Education Credential Program
(Credential Code: 00200)

The joint Multiple Subject Bilingual Credential (Spanish Emphasis) and Level 1 Special Education Specialist Credential for Mild/Moderate Disabilities is a two-year dual credential program. This program is available to students interested in teaching in bilingual elementary classrooms and special education settings. Upon completion, the bilingual 2042 multiple subjects credential authorizes the holder to teach in any self contained bilingual or regular classroom in which one teacher is responsible for all of the subjects commonly taught in the elementary schools. The specialist credential for mild/moderate disabilities authorizes the holder to teach students with designated disabilities in a variety of school settings.

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

The admissions committee consists of faculty advisers from the Policy Studies and Special Education departments. Advisers from both programs will review and interview 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.nesinc.com.
2. Subject Matter Competency. Students must verify completion of subject matter competency in diversified subjects commonly taught in self-contained classrooms prior to admission to the multiple subject bilingual credential program. To be admitted to the multiple subject bilingual credential and Special Education programs, a candidate shall have achieved a passing score on the California Subject Examination for Teachers (CSET) that is required for the credential sought. Registration information and materials for the CSET are available at http://www.cset.nesinc.com.
3. Prerequisite Courses. The following courses must be completed with a grade of C or better prior to admission to the program, but may be in progress at the time of application or taken in the term immediately prior to the program start date.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>PLC 515</td>
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</tr>
<tr>
<td>ED 451 or SPED 527</td>
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</tr>
<tr>
<td>SPED 500</td>
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<tr>
<td>SPED 501 or PLC 523</td>
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<td>SPED 502</td>
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<td>SPED 524</td>
<td>3</td>
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<tr>
<td>TE 280</td>
<td>1</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. Turn-around time for the clearance can take as long as eight months. Possessors of K-12 California credentials may satisfy this requirement by submitting copies of those certificates. Candidates must submit live scan and personal information directly to the California Commission on Teacher Credentialing, http://www.ctc.ca.gov A copy of the certificate of clearance must be provided to the PLC Department.
11. Language and Culture Examination. All candidates must meet the minimum PLC Department Spanish Language Proficiency and Cultural Awareness requirement.
12. Reading Instruction Competence Assessment (RICA). California Education Code Section 44283 requires that candidates for the preliminary or clear credential multiple subject pass this RICA requirement. The purpose of this assessment is to ensure that the candidate possess the knowledge and skills important for the provision of effective reading instruction to students. The RICA requirement applies to candidates who did not complete all credential requirements prior to October 1, 1998. Candidates must have passed the RICA in order to be able to file for the credential.
13. Appeals Process. Candidates who do not meet all the admission requirements may petition the PLC and SPED Department Admissions and Retention Committee for individual consideration; petition letters must be submitted concurrently with the application packets.

14. Application. Applicants should complete application procedures the semester prior to beginning the credential program. Call the department for Policy Studies application deadline.

In addition to the minimum admissions standards identified above, the PLC and SPED Department Admissions and Retention Committee may also consider qualifications such as previous teaching experience and relevant working experience with children. Due to the number of applicants, application to the program does not ensure admission.

Program: Year One

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<td>EDTEC 470</td>
<td>Technologies for Teaching</td>
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</tr>
<tr>
<td>PLC 523</td>
<td>Psychological Foundations for Biliteracy Teachers in K-6 Classrooms</td>
<td>3</td>
</tr>
<tr>
<td>PLC 532</td>
<td>Biliteracy Teaching in Language Arts for Elementary Students</td>
<td>3</td>
</tr>
<tr>
<td>PLC 902</td>
<td>Professional Portfolio (Cr/NC)</td>
<td>1</td>
</tr>
<tr>
<td>PLC 910</td>
<td>Teaching Mathematics to Bilingual Students</td>
<td>3</td>
</tr>
<tr>
<td>PLC 911</td>
<td>Teaching Social Studies to Bilingual Students</td>
<td>3</td>
</tr>
<tr>
<td>PLC 912</td>
<td>Teaching Science to Bilingual Students</td>
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<td>PLC 915A</td>
<td>Teaching and Learning in the Content Area: English Language Development/SDAIE: Multiple Subjects</td>
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<tr>
<td>PLC 931</td>
<td>Skills in Teaching Reading to Bilingual Elementary Students</td>
<td>3</td>
</tr>
<tr>
<td>PLC 960</td>
<td>Student Teaching Seminar for Bilingual Elementary Students/First Semester (Cr/NC)</td>
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<td>PLC 962</td>
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Program: Year Two

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

1. A bachelor’s degree (or higher) with any major other than education.
2. Completion of an approved program of professional education. (See Department of Policy Studies in Language and Cross-Cultural Education for further information.)
3. Passage of Multiple Subject/CSET.
4. Passage of the Spanish Language Proficiency and Cultural Awareness Examination, or CSET LOTE, or Policy Studies in Language and Cross-Cultural Education 415.
5. Demonstrated knowledge of principles and provisions of United States Constitution through successful completion of three-unit college level course or examination. Courses are listed in General Catalog section on “Graduation Requirements,” IV. American Institutions Requirement.
6. Passage of California Basic Educational Skills Test (CBEST).
7. Passage of Reading Instruction Competence Assessment (RICA) Test.
8. Completion of an approved fifth year program (a minimum of 30 upper division or graduate-level postbaccalaureate units).
9. Demonstrated knowledge of the needs of and methods of providing educational opportunities to individuals with exceptional needs.
10. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): Educational Technology 470 and Special Education 560.
11. Knowledge of health education in California, including substance abuse and nutrition: Teacher Education 280 – Health Education for Teachers (1 unit) and verification of CPR competency.
12. Successful completion of the Performance Assessment for California Teachers (PACT).

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

Single Subject (SB 2042) Credential (Secondary Education)

(Credential Code: 00100)

Single Subject–Preliminary Credential

Persons interested in teaching in the traditional secondary school will typically pursue the Single Subject credential which authorizes teaching service in departmentalized, subject matter classrooms in preschools, grades K-12, and in classes organized primarily for adults (classes where instruction is provided in only one subject). Candidates must verify subject matter competency in one of the following subject fields:

ACCEPTABLE SINGLE SUBJECT CREDENTIAL AREAS AND APPLICABLE MAJORS

English language arts: Comparative Literature, English
Science: Biology, Chemistry, Physical Science
Mathematics: Mathematics
Music: Music
Physical education: Kinesiology (Specialization in Physical Education)
Social science: Social Science

Recommendation for this credential requires:
1. A baccalaureate or higher degree.
2. Completion of an approved program of professional education, including student teaching with a grade point average of 3.0 or higher and coursework in reading methods.

3. Basic skills competency as demonstrated through passing scores on the California Basic Educational Skills Test (CBEST).

4. Demonstrated subject matter competency through completion of an approved waiver program in one of the California Single Subject areas or through California Subject Examinations for Teachers (CSET) examinations. Candidates should check with the School of Teacher Education, EBA-255, to clarify the appropriate means for satisfaction of the subject matter competency requirement in their subject matter area(s). Competency must be verified and assessed by a designated departmental advisor regardless of the means of establishing knowledge proficiency.

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

6. Knowledge of health education, including substance abuse and nutrition: Public Health 101, or Teacher Education 280, and verification of CPR competency.

7. Demonstrated knowledge of the needs of and methods of providing educational opportunities to individuals with exceptional needs: Special Education 450 or 500.

8. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): 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.

3. Prerequisite Courses. These courses or approved equivalents must be completed with grades of C, Cr, or higher no more than seven years prior to admission to the Single Subject Credential Program. The courses may be in progress at the time of program application. Proof of registration is required to be considered for admission.

   a. Education 451, “Introduction to Multicultural Education.” This course provides an introduction to ethnicity, language, and culture in education, particularly the ways in which those factors differentially affect educational outcomes for children. The course assists in preparing teacher applicants to work with students from diverse backgrounds by examining both societal and personal belief systems and the ways that those beliefs are expressed in public school classrooms.

   b. Teacher Education 280, “Health Education for Teachers.” This course is a prerequisite for applicants.

   c. Special Education 450, “Classroom Adaptations for Special Populations.” This course is a prerequisite for applicants.

4. Grade Point Average. Candidates must have attained a grade point average of at least 2.67 in all baccalaureate and post-baccalaureate coursework or 2.75 in the last 60 semester (90 quarter) units attempted. Candidates are required to submit official transcripts from all colleges and universities attended and unofficial copies of transcripts for SDSU coursework for GPA calculations.

5. Letters of Recommendation. Candidates must submit two letters of recommendation. One letter must be from a faculty member in the candidate’s major, and one from an individual who knows the candidate well (but is not related by blood or marriage) and who can comment directly on factors such as the candidate’s qualifications for a teaching career in a multicultural setting, work or educational experiences, experience teaching or supervising students or other groups of individuals, personal character, and/or potential for success as a teacher. The signed letters may be hand carried and do not need to be confidential or in sealed envelopes, but must be on letterhead stationery (name, address, and phone number of sender included.) If the letters are not on letterhead, the name, address, and phone number of the sender must be typed on the letter.

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

7. California Certificate of Clearance. This certificate represents a background clearance and check conducted by the State Department of Justice and Federal Bureau of Investigation. Turnaround time for the clearance can take as long as eight months. Possessors of K-12 California credentials may satisfy this requirement by submitting copies of those certificates. Candidates must submit the application directly to the California Commission on Teacher Credentialing. A copy of the certificate prior to admission must be provided to the School of Teacher Education.

8. Early Field Experience. Candidate must successfully complete a minimum of 30 hours of observation and participation in a “regular” classroom in public secondary schools. This is documented through the Early Field Experience Guide – Single Subject available for downloading from the School of Teacher Education Web site at: http://coe.sdsu.edu/site/prospective/application.php. Either the original or a photocopy of the Early Field Experience Guide must be turned in as part of the application to the credential program.

9. Successful completion of the Performance Assessment for California Teachers (PACT).
10. Personal Narrative. The narrative should address the following items:
   a. The candidate’s personal background and experience working with children in multicultural settings;
   b. The candidate’s other experiences personally considered important in the teacher preparation process;
   c. The candidate’s interest in and motivation for a teaching career in a multicultural setting and;
   d. Any abilities, knowledge, skills, or experience that will enhance the candidate’s effectiveness as a teacher (e.g., ability to speak another language, use technologies, or experience working with individuals with disabilities or special needs).

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

In addition to the minimum admissions standards identified above, the Single Subject Admissions and Retention Committee may also consider qualifications such as previous teaching experience, relevant working experience with children, and second language ability. A personal interview may also be necessary. Due to the number of applicants, application to the program does not ensure admission.

NOTE: Appointments for discussion of individual concerns relative to the credential program may be made with the Single Subject Credential program adviser during the academic year through the School of Teacher Education, EBA-259, 619-594-6320. All candidates are urged to attend one of the regularly scheduled group advising sessions prior to making an individual appointment.

Program Description

The Single Subject Credential Program is offered in a variety of formats called “blocks” to include full-time blocks over two semesters and a three semester block. Full-time student teaching is required of all candidates according to C. Section 48370. Examinations taken as 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.

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**

<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 (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>14</td>
</tr>
<tr>
<td>TE 964</td>
<td>Secondary School Student Teaching II (Cr/NC/RP)</td>
<td>12</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 915B</td>
<td>Teaching and Learning in the Content Area: ELD/SDAIE: 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>
<th>Course Title</th>
<th>Units</th>
</tr>
</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</td>
<td>3</td>
</tr>
<tr>
<td>ETEC 470</td>
<td>Technologies for Teaching</td>
<td>3</td>
</tr>
<tr>
<td>PLC 915B</td>
<td>Teaching and Learning in the Content Area: ELD/SDAIE: Single 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 903</td>
<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:</td>
<td>3</td>
</tr>
<tr>
<td>TE 922</td>
<td>Behavioral and Psychological Aspects of Teaching</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</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).
Education

Single Subject Bilingual 2042
Credential (Secondary Education Grades 6 through 12): Spanish Emphasis

(Credential Code: 00100)

The Single Subject Bilingual (Spanish) Teaching Credential (Secondary Education) is available for students interested in teaching in a bilingual middle or secondary school classroom. This credential authorizes the holder to teach in any self-contained bilingual or regular classroom in which one teacher is responsible for teaching the given subject area.

Candidates who will pursue this credential need to specify "Single Subject Credential Bilingual" in the application for graduate admission to SDSU (Code: 00100). Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee.

Standards for Admission

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

2. Subject Matter Competency. Students must verify competency in a specified single subject area through a university assessment process which consists of reviewing coursework for completion of an approved teaching major or its equivalent at San Diego State University or another approved California teacher-training institution or through California Subject Examinations for Teachers (CSET). Competency will be assessed and verified by subject matter departments at SDSU. Requirements for the various single subject majors are listed with the academic majors in the General Catalog. Test scores submitted for verification of subject matter competency are valid for five years from the date of the examination. Information and registration materials are available at http://www.cset.nesinc.com.

3. Prerequisite Courses: The following courses must be completed with a grade of C- or better prior to admission to the program, but may be in progress at the time of application or taken in the term immediately prior to the program start date.

- PLC 515 Multilingual Education: Theory and Practice for Biliteracy Teachers ........................................ 3
- ED 451 Introduction to Multicultural Education ......................................................... 3
- SPED 500 Human Exceptionality ....................................................................... 2
- TE 280 Health Education for Teachers ................................................................. 1

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

5. Letter of Recommendation. Two professional references and one letter of recommendation must be submitted attesting to the applicant’s following characteristics: (a) attitude, aptitude and ability to teach children; (b) personality and character; (c) academic ability. Letter of recommendation should be from a school teacher with whom the student has worked and the others may be from faculty and administrators.

6. Tuberculin Clearance. Evidence of a negative 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 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 advisor to plan an appropriate program, which includes a minimum of 31 units as defined by the Commission on Teacher Credentialing. Appointments can be made in EBA-248, 619-594-5155.

11. Language and Culture Examination. All candidates must meet Language Proficiency and Cultural Awareness requirements for the language of emphasis to meet their specific bilingual authorization.

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

13. Application. Applicants should complete application procedures the semester prior to beginning the credential program. Call the department for PLC application deadline.

In addition to the minimum admissions standards identified above, the PLC Department Admissions and Retention Committee may also consider qualifications such as previous teaching experience and relevant working experience with children. Due to the number of applicants, application to the program does not ensure admission.

Single Subject Bilingual Program

<table>
<thead>
<tr>
<th>Prerequisites</th>
<th>Units</th>
</tr>
</thead>
</table>
| PLC 515 | Theories and Practices in Multilingual Education ......................................... 3
| ED 451 | Introduction to Multicultural Education ......................................................... 3
| SPED 450 | Classroom Adaptations for Special Populations .................................................. 2
| TE 280 | Health Education for Teachers ................................................................. 1

First Semester

- PLC 460 The Secondary School and Bilingual Education ........................................ 3
- PLC 524 Psychological Foundations for Biliterate Teachers in Grades 7-12 .................. 3
- PLC 933 Skills in Teaching Reading to Bilingual Secondary Students .......................... 3
- PLC 954 Classroom Organization for Democratic Teaching ..................................... 1-4
- PLC 960 Student Teaching for Bilingual Secondary Students I (Cr/NC) ......................... 4
- TE 914 Teaching and Learning in the Content Area, Major ........................................ 3

Second Semester

- PLC 903 Bilingual Secondary Student Teacher Seminar (Cr/NC) ............................ 3
- PLC 915B Teaching and Learning in the Content Area: ELD/SDAIE: Single Subject .......... 3
- PLC 964 Student Teaching for Bilingual Secondary Students II (Cr/NC) ...................... 9-12
- ED 970 Teaching Event Assessment (Cr/NC) ......................................................... 3
- EDTEC 470 Technologies for Teaching .............................................................. 3
Preliminary Credential Requirements

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

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

3. Major Adviser’s Recommendation. Passage of subject matter examination(s) or waiver thereof through completion of one of the approved single subject credential majors listed below with a written recommendation from the Ryan major adviser.

Demonstrated subject matter competency through completion of approved waiver program in one of the California single subject areas, is through a combination of coursework and competency examinations, or through PRAXIS/SSAT/CSET examinations. Candidates should check with the Policy Studies in Language and Cross-Cultural Education Department (PLC), EBA-248, to clarify the appropriate means for satisfaction of the subject matter competency requirement.

4. Successful completion of Language Proficiency and Cultural Awareness requirements for the language of emphasis.

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

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

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

8. Demonstrated knowledge of the needs of and methods of providing educational opportunities to individuals with exceptional needs, Special Education 500.

9. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): Educational Technology 470 or Special Education 560.

10. Knowledge of health education in California, including substance abuse and nutrition: Teacher Education 280 – Health Education for Teachers (1 unit) and verification of current CPR competency.

11. Successful completion of the Performance Assessment for California Teachers (PACT).

Undergraduate students in their final semester prior to obtaining a baccalaureate degree may sign up for concurrent postbaccalaureate credit as explained in the bulletin.

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

Bilingual Cross-Cultural Specialist Credential

(Credential Code: 00440)

The Bilingual Cross-Cultural Specialist Credential will prepare teachers to be mentors, curriculum, and staff developers. Teachers will acquire skills in being reflective practitioners, facilitators of critical inquiry and cultural mediators linked with the school community through action research. The credential leads to the Policy Studies in Language and Cross-Cultural Education M.A. Option 1.

Prerequisites: CLAD or BCLAD credential or certificate; minimum three years teaching experience; admission to program.

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>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE 530</td>
<td>Children's/Adolescents’ Literature</td>
<td>3</td>
</tr>
<tr>
<td>TE 631</td>
<td>Seminar in Language Arts</td>
<td>3</td>
</tr>
<tr>
<td>TE 633</td>
<td>Leadership in Literacy Education</td>
<td>3</td>
</tr>
<tr>
<td>TE 634</td>
<td>Seminar in Research Investigations in Reading and Language Arts</td>
<td>4</td>
</tr>
</tbody>
</table>

Program

24 units of coursework and a comprehensive examination to include:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED 690</td>
<td>Methods of Inquiry</td>
<td>3</td>
</tr>
<tr>
<td>PLC 553</td>
<td>Language Assessment and Evaluation in Multicultural Settings</td>
<td>3</td>
</tr>
<tr>
<td>PLC 600A</td>
<td>Foundations of Democratic Schooling</td>
<td>3</td>
</tr>
<tr>
<td>PLC 603</td>
<td>Community and Schools in a Diverse Society</td>
<td>3</td>
</tr>
<tr>
<td>PLC 612</td>
<td>Qualitative Inquiries in Communities and Schools</td>
<td>3</td>
</tr>
<tr>
<td>PLC 613</td>
<td>Organizational Strategies and Professional Development for the Multicultural School Community</td>
<td>3</td>
</tr>
<tr>
<td>PLC 650</td>
<td>Curriculum Development for Urban School Communities</td>
<td>3</td>
</tr>
<tr>
<td>PLC 666</td>
<td>Seminar in Multicultural Education</td>
<td>3</td>
</tr>
</tbody>
</table>

OR

Three units of electives with consent of adviser.

Multiple Subject and Single Subject Professional Clear Teaching Credential

The San Diego State University, College of Education, Clear Credential Program is approved by the Commission on Teacher Credentialing (CTC) and is structured around support, collaboration, university coursework, action research, and formative assessment. The year-long program offers individualized support based on the candidate’s instructional context and needs, develops deeper understandings of pedagogy, and advances knowledge and application of current universal access paradigms. Throughout the program, a cycle consisting of growth plan development, Planning for instruction, Instructing, Assessing student learning, Reflection, and Application to subsequent planning and instruction (PIARA) model of formative assessment occurs, integrating university coursework with practical action research in the candidate’s classroom.

This coursework cannot be taken prior to issuance of the preliminary credential.

Prerequisites: A valid SB 2042 Preliminary Multiple or Single Subject Credential, or the equivalent, and verification by the employing school district or private school employer than an induction program is not available to the applicant.

For additional information, contact Lisa McCully, Director of the Office of Student Services, in the College of Education at lmccully@mail.sdsu.edu.
**Education Specialist Credentials in Special Education**

San Diego State University offers programs leading to the following Education Specialist Credentials in Special Education authorized by the California Commission on Teacher Credentialing: Mild/Moderate Disabilities, Moderate/Severe Disabilities, and Early Childhood Special Education. These credentials authorize the holders to teach students with designated disabilities in a variety of settings. These credentials require completion of Preliminary Level I requirements followed by completion of the Clear Professional Level II requirements within five years of employment in an authorized setting. The department also offers the Early Childhood Special Education Certificate which authorizes holders of other specialist credentials to work with children and their families from birth through pre-kindergarten. There are some common requirements between the Education Specialist credential programs and the Master of Arts degree. Once admitted, students must maintain a GPA of 3.0 and must successfully complete all practicum experiences. Only grades of C or better will count toward a degree, a credential, or a certificate.

### Standards for Admission

Candidates for any of the Education Specialist Credentials in Special Education must satisfy the standards and qualifications listed below and submit complete application packets to the Department of Special Education (NE 70) within designated application periods. Information about applications for Program Admission is available from the Office of Advising and Recruitment, EBA-259.

1. **CBEST Examination.** Students must pass the California Basic Educational Skills Test (CBEST) prior to admission to any of the programs that lead to an Education Specialist Credential in Special Education. Information may be obtained from the Student Testing, Assessment and Research Office, SS-2549. Candidates are urged to take this examination as early as possible. Candidates are required to submit a photocopy of the individual score reports.

2. **Subject Matter Competence.** Students must verify completion of subject matter competence with a passing score on the CSET: Multiple Subjects. Credential holders should see an adviser for clarification.

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

3. **Demonstrated knowledge of the principles and provisions of the United States Constitution through successful completion of a three-unit collegiate-level course or examination.** Courses are listed in the 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 tuberculous 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 fingerprinting. Therefore, applicants are advised to use Livescan. Possessors of K-12 California credentials may satisfy this requirement by submitting copies of those certificates. In lieu of the actual Certificate of Clearance or copy of a credential, candidates may submit their clearance application packets and fees to the Credentials Processing Center, EBA-250.

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

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

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

### Preliminary Education Specialist Level I Credential Programs

1. **Core courses:** Special Education 505#\(^\#\), 553#\(^\#\), 560, 662^\(^*\), 970, 980. Candidates are required to pass the Reading Instruction (RICA) Test.

2. **Specialization courses:**
   a. **Mild/Moderate Disabilities:** Teacher Education 910A (2 units), 930 (3 units); Special Education 510^\(^\#\), 530^\(^\#\), 534, 647^\(^\#\), 648, 657, 970A, 980A; and 970A (for part-time students).
   b. **Moderate/Severe Disabilities:** Teacher Education 910A (2 units), 930 (3 units); Special Education 510, 526, 530, 635, 645, 647, 657, 970B, 980B; and 970B (for part-time students).
   c. **Early Childhood Special Education:** Special Education 510, 526, 530, 635, 643A, 643B, 980D (Infant/Toddler), 980D (Preschool); and 970B (for part-time students).

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\(^\#\) Not required for Early Childhood Special Education.

\(^\#\#\) Those seeking severe emotional disabilities (SED) must take these courses.

^\(^*\) Those seeking autism authorization must take these courses.
Clear Professional Level II Specialist Credential Programs
Requirements for Admission

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

1. **University Standards.** Students must satisfy university standards and qualifications for admission to postbaccalaureate standing.
2. **Level I Credential.** Students must hold or be eligible for a Preliminary Education Specialist Level I Credential or hold a valid out-of-state credential in a special education category comparable to a California Commission-approved Preliminary Level I program authorizing special education service. Level I or out-of-state credentials must be in the area of study for which students are seeking a Level II credential.

**Program**

1. Prerequisite: Special Education 975. (1 unit)
2. Core courses: Special Education 605 (1 unit) and 985 (1 unit). (2 units)
3. Specialization courses:
   a. **Mild/Moderate Disabilities:** Special Education 634, 651, 653. (7 units)
   b. **Moderate/Severe Disabilities:** Special Education 651, 654. (5 units)
   c. **Early Childhood Special Education:** Special Education 651, 655. (6 units)
5. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): Educational Technology 470. Students who complete their Level I credential at SDSU will meet this requirement with Special Education 560.

Reading Recovery® Teacher Leader

The Reading Recovery® Teacher Leader training program is to prepare qualified individuals to implement reading recovery in their own districts or regions. Teacher leader candidates are selected by their districts to participate in the year-long coursework that prepares them to provide reading recovery training to teachers in their districts, based on their potential as leaders and their educational backgrounds. Each teacher leader candidate must hold a master’s degree which qualifies them to teach reading recovery courses in their districts for university credit. A faculty member in the College of Education is responsible for providing coursework and supervision of teacher leader candidates.

Courses required in the program include two semesters 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 ongoing 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 share 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.

Behavior Analysis Certificate
(Major Code: 99049) (SIMS Code: 331998)

The behavior analysis certificate provides the foundational knowledge for educators, psychologists, and other interventionists to provide intervention practices based on principles of behavior analysis. The courses are approved by the Behavior Analysis Certification Board as the content sequence required prior to taking the examination.

Admission Requirements

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


**Education**

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

**Cognitive Disabilities Certificate**

This certificate program is designed for current and aspiring rehabilitation counselors who are, or intend to become providers of vocational and independent living services on behalf of persons with cognitive disabilities, to include those with autistic spectrum disorders, intellectual disability, traumatic brain injuries, and learning disabilities. The certificate prepares rehabilitation counselors to work in the State/Federal vocational rehabilitation system, the U.S. Department of Veteran Affairs, California Regional Centers, or other government agencies supporting persons with cognitive disabilities, nonprofit community rehabilitation provider agencies, and student disability service programs of community colleges and universities.

**Prerequisites:** A bachelor’s degree from an accredited institution with demonstrated experience in disability-related work and/or academic coursework. Students do not need to be enrolled in the SDSU Master of Science degree in rehabilitation counseling to enroll in the certificate program.

Required courses (18 units):
- ARP 645A Assessment in Rehabilitation (3)
- ARP 680 Seminar in Administration, Rehabilitation and Postsecondary Education: Cognitive Disabilities (3)
- ARP 687 Placement Practices with Individuals with Disabilities (3)
- ARP 744 Practicum in Rehabilitation (3) Cr/NC
- ARP 745 Internship in Rehabilitation (6) Cr/NC

ARP 680 and 744 are focused on cognitive disabilities and taught in alternating spring semesters so that each course is offered once every two years. The remaining required courses are offered annually. Students will complete 600 hours of internship in ARP 745 by either taking two three-unit (fall and spring semesters) or one six-unit ARP 745 course (one semester). The internship will be completed in a rehabilitation agency supporting persons with cognitive disabilities.

Students must complete 18 units with a 3.0 (B) grade point average. Students in the certificate program will complete nine units of formal coursework, three units of practicum, and six units of internship as described unless the program adviser approves alternative coursework. Major assignments in all courses will focus on rehabilitation and cognitive disabilities, and the culminating assignment will be a comprehensive portfolio of work completed during the certificate.

Only three units of coursework with a grade of C will count towards the certificate. A maximum of three units of coursework can be repeated.

The program director will meet with each certificate student to design an individualized program of study based on the student’s educational background and professional experience. Students may concurrently enroll in the certificate program and Master of Science degree in rehabilitation counseling. For further information call 619-594-6921.

**Community College Teaching Certificate**

(Major Code: 99043) (SIMS Code: 330302)

The purpose of this certificate program is to prepare students to teach in community colleges within the transfer, developmental, vocational, and adult education areas. The program provides students with experiences in curriculum development and evaluation, instructional techniques, methods to meet adult learning needs, and a practical internship in a local community college.

This is an advanced academic certificate at the post-baccalaureate level. Admission requirements are a bachelor’s degree from a regionally accredited institution of higher education, with at least a 2.85 GPA in the last 60 units.

Students must complete the following courses with a minimum grade of B in each course and C or better in ARP 760. Courses in the certificate program may be applied to a master’s degree if applicable.

**Developing Gifted Potential Certificate**

(Major Code: 99043) (SIMS Code: 330305)

The purpose of this certificate program is to provide teachers and other education professionals with specialized preparation for supporting talent development and providing effective educational services to gifted and talented individuals in a diverse society. The certificate is designed to provide knowledge and skills to (a) encourage the development and expression of high potential, particularly among students currently underrepresented in formal programs for the gifted and (b) provide effective instruction to individuals formally identified as gifted and talented. Hence the program is designed for professionals working in regular and special classrooms settings.

Successful applicants must have completed a bachelor’s degree from an accredited institution. A minimum grade point average of 3.0 must be maintained in certificate coursework with no less than a grade of C in any course.

Required courses (15 units): Special Education 644, 771, and nine units selected with approval of adviser. All courses completed with a grade of B or better are applicable to the Master of Arts degree in Educational Leadership 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 correspondence education, training, HRD or a related field. Mastery in telecommuting and learning new information technology applications.

Required courses (9 units):
- EDTEC 640 Psychology of Technology-Based Learning (3)
- EDTEC 650 Distance Education (3)
- EDTEC 684 Management of Educational Technology (3)

Electives: (3 units) to be selected from the following with approval of program adviser:
- EDTEC 544 Instructional Design (3)
- EDTEC 670 Exploratory Learning Through Simulation and Games (3)
- EDTEC 671 Learning Environment Design (3)
- EDTEC 685 Informational and Instructional Technologies for Organizations (3)
- EDTEC 700 Seminar in Educational Technology: Best Practices in Distance Education (1)
- EDTEC 700 Seminar in Educational Technology: Cybergogy and Engaged Learning (1)
- EDTEC 700 Seminar in Educational Technology: Management Issues in Distance Education (1)
Dual Language Certificate in Biliteracy
(Major Code: 90301) (SIMS Code: 330306)
This certificate program provides K-12 teachers and other education professionals with specialized coursework in dual language programs; and provides instruction in two languages aimed for credentialed bilingual teachers to develop bilingualism, biliteracy, and biculturalism/multiculturalism. Applicants must have completed a bachelor’s degree from an accredited institution and hold a current bilingual teaching BCLAD, CLAD, SB 2042 multiple or single subject credential, or administrative credential, and meet the minimum language requirements of the SDSU/COE based language test (e.g. Spanish).
Required courses (12 units): Policy Studies in Language and Cross-Cultural Education 553, 600B, 604, 650. A minimum grade point average of 3.0 must be maintained in certificate coursework with no less than a grade of C in any course.

Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRIS) Certificate
The certificate program in Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRIS) is an interdisciplinary program focusing on professional preparation and skills enhancement of early childhood educators who work with young children who demonstrate socio-emotional and behavioral problems and their parents.
Eighteen program units are required to earn the certificate in Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRIS). Twelve units of seminar courses addressing core knowledge foundations and six units of practicum/field experience. Courses in the certificate program may be applied to the master’s degree in child development if applicable.
Prerequisites for admission:
1. Successful completion of a bachelor’s degree in a field related to child development, psychology, social work, human development, school counseling, or social services from an accredited institution, and relevant work experience in the early childhood education field.
2. Successful completion of the application and interview process.
3. Coursework relating to: early years of development, parenting, family functioning and parent-child relationships, children with special needs, and theories in socio-emotional development. If students’ undergraduate preparation is deemed insufficient, students will be required to complete specified courses as determined by the certificate program’s adviser.
4. Recommendation of employer and/or director of certificate program.
Course requirements (18 units). The EC-SEBRIS certificate is modeled following the Delivery of Infant-Family and Early Mental Health Services Revised Training Guidelines and Personnel Competencies proposed by the California’s Infant, Preschool and Family Mental Health Initiative (2003; Workforce 2008). It includes two main areas: knowledge and experience. The knowledge base is comprised of four foundation classes. Two practicum courses that include clinical experience/supervision in early childhood setting and programs accompanied by Reflective Practice Facilitation (total of 500 hours of supervised practicum).
Students must complete the course requirements with a minimum 3.0 (B) grade point average.

Early Childhood Special Education Authorization Certificate
(Major Code: 99041) (SIMS Code: 330301)
The Early Childhood Special Education Authorization Certificate is authorized by the California Commission on Teacher Credentialing. It is designed for individuals who have completed Preliminary Education Specialist Level I coursework in Mild/Moderate or Moderate/Severe disabilities. It extends authorization from birth through 22. Individuals credentialed in other areas such as Deaf and Hard-of-Hearing and Visual Impairments are authorized to serve birth through 22, but may add the certificate for professional growth reasons if desired.
1. Prerequisite: Completion of Level I coursework in one of the Education Specialist credentials and background in early childhood development with focus on infants, toddlers, and preschoolers.

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):
AR 611 Program Development and Evaluation in Postsecondary Education (3)
AR 725 Seminar in Institutional Planning, Analysis, and Assessment (3)
AR 727 Emerging Issues in Postsecondary Educational Leadership (3)
AR 760 Internship in Postsecondary Educational Leadership (3) Cr/NC/RP

Three units of AR 760 will be completed in an institutional research and/or assessment setting.

Students must maintain a minimum grade point average of 3.0 in allcertificate 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. Brescia, 619-594-8318.

**Instructional Design Certificate**

The purpose of this certificate is to prepare specialists who can develop or assist in the development of software to meet specific instructional, training or management needs. There are two competency areas incorporated in the certificate: instructional design and educational computing. Students must complete a minimum of 18 units with a 3.0 (B) grade point average and no less than a C in any course. For application or further information, see the director of the program in the Department of Educational Technology.

**Prerequisites:** A bachelor’s degree from an accredited institution with a grade point average of at least 2.85 (when A equals 4) in the last 60 semester (90 quarter) units attempted. A satisfactory score on the verbal and quantitative sections of the GRE-General Test.

Required courses (9 units):
EDTEC 540 Educational Technology (3)
EDTEC 541 Educational Web Development (3)
EDTEC 544 Instructional Design (3)

Elective courses: Nine units at the 600- or 700-level to be selected with the approval of the program director.

**Instructional Technology Certificate**

Refer to General Catalog.

**Primary Grade Writing Instruction Certificate**

(Major Code: 90300) (SIMS Code: 330304)

This certificate program provides teachers with specialized preparation for teaching writing in primary grade classrooms, with a focus on development of expertise in (1) formal and informal assessment, (2) children’s expanded language skills and use of specific text structures across genres and for content-area learning, (3) effective writing instruction using instructional scaffolding, contingent teaching and teaching of strategic behavior, (4) expertise in a set of effective instructional frameworks, and (5) relating standards and high stakes assessment to design and implementation of daily instruction. The program is designed for professionals teaching in classrooms with diverse language learners.

Successful applicants must hold a current multiple subjects teaching credential and have experience teaching primary grade children. A minimum grade point average of 3.0 must be maintained in certificate coursework with one course grade of C allowed.

Required courses (12 units): Teacher Education 639, 641, 642, 643. Credit for successful completion of TE 639 (3) is also applicable to a reading/language arts specialist credential or Master of Arts degree in Education with a concentration in reading education. For further information, contact the program adviser, Dr. Sharan A. Gibson, 619-594-7182 or sgibson@mail.sdsu.edu.

**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):
AR 660 Theory and Process of Counseling in Rehabilitation (3)
AR 680 Seminar in Administration, Rehabilitation and Postsecondary Education: Psychiatric Rehabilitation (3)
AR 687 Placement Practices with Individuals with Disabilities (3)
AR 740 Advanced Seminar in Administration, Rehabilitation and Postsecondary Education: Psychiatric Rehabilitation (3)
AR 745 Internship in Rehabilitation (3) Cr/NC

Students must maintain a minimum grade point average of 3.0 in all certificate coursework with no less than a grade of C in any course. Only three units of coursework with a grade of C will count towards the certificate. A maximum of three units of coursework can be repeated. Courses in the certificate program may be applied to a master’s degree if applicable.

For further information, contact the program adviser, Dr. Marjorie F. Olney, 619-594-6883.

**Reading Certificate**

This certificate is authorized by the California Commission on Teacher Credentialing and designed to improve K-12 classroom teacher and community college instructor expertise for literacy instruction from emergent through adolescence and adult levels. The 13-unit program addresses direct instruction in specific skills and strategies; formal and informal literacy assessment; knowledge about reading and writing across content areas; role of writing in learning; student motivation and engagement through reading, writing, and discussion. Courses for the reading certificate completed with a grade of B or better are also acceptable in partial fulfillment of the Master of Arts degree program in reading education and reading/language arts specialist credential programs, upon the candidate’s acceptance into these programs. Students admitted to the Master of Arts in Teaching degree program can choose to complete the reading certificate as their area of concentration.
Required courses (13 units):
- TE 635 Assessment of Reading and Language Arts (3)
- TE 636 Advanced Assessment of Reading and Language Arts (3)
- TE 637 Instructional Strategies for Reading and Language Arts (4)
- TE 639 Literacy and Language (3) OR
- TE 677 Research-Based Pedagogy for Diverse Learners (3)

Additional requirements:
To be eligible to apply for the Reading Certificate from the CCTC after completion of coursework, the candidate must also satisfy the following requirements:
1. A valid California teaching credential within the range of grades Kindergarten through 12.
2. A minimum of three years of full-time K-12 teaching experience within the range of grades Kindergarten through 12.

Rehabilitation Administration Certificate
(Major Code: 90028) (SIMS Code: 330201)
This certificate program provides the student with administrative knowledge and skills to develop and supervise rehabilitation programs and services, in collaboration with consumers, in a variety of organizational settings. This academic certificate is designed for individuals who currently function or aspire to function as program coordinators and administrators in state rehabilitation agencies, community rehabilitation programs, disability management programs, postsecondary education organizations, and other programs and/or organizations involved in serving consumers with disabilities.

This is an advanced academic certificate at the postbaccalaureate level. Admission requirements are a bachelor's degree in rehabilitation or a related field and relevant work experience in a rehabilitation organization or program. The certificate is intended to focus on diversity among consumer populations and service delivery systems within the student's area of career interest. Unique focus areas such as disability management, tribal rehabilitation or deafness, and hard-of-hearing organizations 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 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 741 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

Students must maintain a minimum grade point average of 3.0 in all certificate coursework with no less than a grade of C in any course. Only three units of coursework with a grade of C will count towards a certificate. Maximum of three units of coursework repeatable. Courses in the certificate program may be applied to a master's degree if applicable.

Rehabilitation Counseling Certificate
(Offered through the College of Extended Studies)
(Major Code: 90056) (SIMS Code: 330203)
The Advanced Certificate in Rehabilitation Counseling is designed for current and aspiring rehabilitation counselors who are, or intend to become, holders of the certified rehabilitation counselor credential, per Category R established by the Commission on Rehabilitation Counselor Certification. The advanced certificate prepares holders to work in the California Department of Rehabilitation and other California vocational rehabilitation agencies, the United States Department of Veteran Affairs, California Regional Centers, or other government agencies supporting persons with disabilities, nonprofit community rehabilitation provider agencies, and student disability service programs in community colleges and universities.

Prerequisites: Applicants must possess a bachelor's degree and master's, specialist, or doctoral degree in one of 13 different majors from an accredited institution with demonstrated experience in disability-related work and/or academic coursework. Qualifying majors include: behavioral health; behavioral science; disability studies; human relations; human services; marriage and family therapy; occupational therapy; psychology; psychometrics; rehabilitation; social work; special education; vocational assessment/evaluation.

Students do not need to be in the SDSU Master of Science degree in Rehabilitation Counseling to register in the certificate program.

Required courses (18 units):
- ARP 645A Assessment in Rehabilitation (3)
- ARP 660 Theory and Process of Counseling in Rehabilitation (3)
- ARP 680 Seminar in Administration, Rehabilitation and Postsecondary Education: Disability Systems (3)
- ARP 684 Rehabilitation Foundations (3)
- ARP 685A OR
- ARP 685B Medical and Psychological Aspects of Disability (3)
- ARP 687 Placement Practices with Individuals with Disabilities (3)

Electives: If one or more of the required courses has been completed, substitute elective(s) can be taken with consent of the coordinator. Students must complete the course requirements with a 3.0 (B) grade point average. Three units of coursework with a grade of "C" is applicable to the certificate program. Maximum three units of coursework can be repeated.

Students may be concurrently registered in the Advanced Certificate in Rehabilitation Counseling and the Master of Science degree in Rehabilitation Counseling. An individualized program of study based on the student's educational background and professional experience will be designed with the coordinator.

For further information, contact the program coordinator at 619-594-6921.
## Bilingual (Spanish) Special Education Certificate
(Major Code: 90026) (SIMS Code: 330101)

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED 501 Typical and Atypical Learning Processes</td>
<td>3</td>
<td>For students with demonstrated experience in teaching handicapped students whose primary language is Spanish.</td>
</tr>
<tr>
<td>OR</td>
<td>684</td>
<td>Rehabilitation Foundations</td>
</tr>
<tr>
<td>OR</td>
<td>687</td>
<td>Placement Practices with Individuals</td>
</tr>
<tr>
<td>OR</td>
<td>771</td>
<td>Directed Internship: Special Education Cr/NC</td>
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<tr>
<td>OR</td>
<td>743</td>
<td>Fieldwork in Rehabilitation Cr/NC</td>
</tr>
<tr>
<td>OR</td>
<td>730</td>
<td>Fieldwork in Counseling Cr/NC</td>
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</tbody>
</table>

No new students are being admitted to this program. Contact the Department of Special Education.

This certificate program provides specialized preparation for teachers of learning handicapped children whose primary language is Spanish.

Prerequisites for admission include the following:
1. Completion of, or admission to, the departmental program for the Specialist Credential in Special Education (Learning Handicapped).
2. Special Education 527.
3. Spanish language proficiency at the S-3 (FSI 3) level.
4. Knowledge of the target culture and bilingual teaching strategies. Proficiency may be demonstrated by passing the “Test of Culture and Teaching” used by the College of Education bilingual emphasis programs.

Certificate program requirements include the following: Policy Studies in Language and Cross-Cultural Education 553, three units of special education selected with the approval of the department chair, and demonstration of competence in teaching 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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED 501 Typical and Atypical Learning Processes</td>
<td>3</td>
<td>For students with demonstrated experience in teaching handicapped students whose primary language is Spanish.</td>
</tr>
<tr>
<td>OR</td>
<td>684</td>
<td>Rehabilitation Foundations</td>
</tr>
<tr>
<td>OR</td>
<td>687</td>
<td>Placement Practices with Individuals</td>
</tr>
<tr>
<td>OR</td>
<td>771</td>
<td>Directed Internship: Special Education Cr/NC</td>
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<tr>
<td>OR</td>
<td>743</td>
<td>Fieldwork in Rehabilitation Cr/NC</td>
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<tr>
<td>OR</td>
<td>730</td>
<td>Fieldwork in Counseling Cr/NC</td>
</tr>
</tbody>
</table>

Required courses (9 units)

- SPED 501 Typical and Atypical Learning Processes (3)
- OR ARP 684 Rehabilitation Foundations (3)
- OR ARP 687 Placement Practices with Individuals with Disabilities (3)
- OR SPED 771 Directed Internship: Special Education (3) Cr/NC
- OR ARP 743 Fieldwork in Rehabilitation (3) Cr/NC
- OR CSP 730 Fieldwork in Counseling (3) Cr/NC

Twelve units of adviser approved Administration, Rehabilitation or Postsecondary Education; Special Education, and/or Counseling and School Psychology coursework.

Dr. Caren L. Sax is the program adviser in the Department of Administration, Rehabilitation and Postsecondary Education. She meets with each certificate student to design an individualized program of study based on the student’s educational background and professional experience. Students may enroll in certificate program and master’s degree program concurrently.

## Workforce Education and Lifelong Learning Certificate
(Major Code: 90037) (SIMS Code: 335601)

The certificate offers advanced study and field-based research opportunities for educators and human service personnel interested in assuming leadership roles in the development of education and training programs for non-college bound youth and adults. Employment opportunities include positions as training specialists, instructional developers, program administrators, and instructors in community colleges, adult education programs, and job training programs.

Improving the knowledge and skills of families and workers is one of the most important challenges facing American education. Economists note that even if school reform could be rapidly accomplished, it would have minimal influence on productivity, literacy, or quality of life in the work place during the next 20 years because out-of-school youth and adults are not subject to school reform, and they will constitute the vast majority of the American workforce well in this century.

Successful applicants must have completed a bachelor’s degree from an accredited institution and demonstrate a record of excellence in working with youth or adults in schools, agencies, or employer-sponsored education and training programs. A minimum grade point average of 3.0 must be maintained in certificate coursework.

Required courses (12 units)

- EDTEC 544 Instructional Design (3)
- ARP 565 Psychological Foundations of Adult and Vocational Education (3)
- ARP 631 Seminar in Teaching in Postsecondary Education (3)
- ARP 730 Seminar in Adult Learning (3)

Electives: Three units selected with approval of the certificate program director. For further information, please contact the graduate adviser in the Department of Administration, Rehabilitation and Postsecondary Education.

Courses Acceptable on Master’s and Doctoral Degree Programs in Education (ED)

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

### UPPER DIVISION COURSE

**ED 516. Foundations of Bilingual Education (1)**

(Offered only at IVC)

Prerequisite: Credit or concurrent registration in Education 451.

Overview of models of bilingual education programs for language minority students.

**GRADUATE COURSES**

NOTE: Twelve units of professional education are prerequisite for enrollment in all graduate courses.

**ED 690. Methods of Inquiry (3)**

Procedures for gathering, analyzing, and synthesizing information; reviewing the literature; designing studies. Section selection to be made with department graduate adviser.

**ED 696. Selected Topics in Community Influences on Learning and Curriculum Planning (1-3)**

Prerequisite: Teaching experience.

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

**ED 791A. Evaluation Techniques (3)**

Prerequisites: Education 690 and advancement to candidacy for the master’s degree.

Theory and practice of instructional program and product evaluation.
ED 791B. Practicum: Evaluation (1-3)

791B: Lecture.
Prerequisites: Education 791A and advancement to candidacy for the Master of Arts degree in education.
Supervised experience in conducting a program or product evaluation, strategy selection, procedures, reporting methods, culminating in a written project.

ED 795A–795B. Seminar (3-3)
Prerequisites: Education 690 and advancement to candidacy for the Master of Arts degree in education.
An intensive study in selected areas of education culminating in a written project. Limited to students following Plan B for the Master of Arts degree in education.

ED 797. Research (1-3) Cr/NC/RP
Prerequisites: Education 690 and advancement to candidacy for the master’s degree.
Research in one of the fields of education. Maximum credit six units applicable to a master’s degree.

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

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

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

DOCTORAL COURSES

ED 801. Seminar on Social and Cultural Foundations of Multicultural Education (3-4)
Prerequisites: Admission to the doctoral program or consent of the graduate coordinator. Students are required to have a background in the social sciences or humanities relevant to such educational issues as social behavior and minority cultures.
Social and cultural parameters that have contributed to the shaping of American society and affected developments in education in the last two decades. Emphasis on the impact on multicultural education and human social behavior in pluralistic societies.

ED 804. Bilingual Education: Models and Current Research Trends (3-4)
Prerequisites: Education 801, a background in sociolinguistics or social anthropology and admission to the doctoral program or consent of graduate coordinator.
Analysis of existing models of bilingual education based on previously identified needs of linguistic minority students. Demonstrated needs from current research in classrooms by ethnographers. Significance of linguistic/cultural competencies for academic performance and validity of existing impact studies.

ED 806. Ethnically Diverse Learners: Public Policy and Classroom Practice (3-4)
Prerequisites: Education 801 and admission to the doctoral program or consent of the graduate coordinator. Background in psychological foundations of education and educational policy is required.
National, state, and school policy directed at providing the minority learner with equal educational opportunity. Discussion of legislation for desegregation, bilingual education, school implementation cases and classroom practices as these relate to equal educational opportunity.

ED 810. Seminar in Curriculum Development and Implementation (3)
Prerequisite: Admission to doctoral program.
Curriculum development and implementation to include culturally diverse contexts with emphasis on reflective implementation and critical analysis of commercial and site-based curriculum.

ED 814. Seminar in Curricular Change Processes (3)
Prerequisite: Education 810.
Curriculum change processes in educational organizations. Process of planning change and elements necessary for implementing and managing curriculum change to include diverse cultural contexts.

ED 815. Re-Thinking Leadership (3)
Prerequisite: Admission to educational leadership doctoral program.
Concepts of individual and group leadership in educational environments. Practices and policies of effective management and leadership; ethical and emerging trends in leadership styles.

ED 820. Advanced Educational Statistics (3-4)
Prerequisites: Education 690, Teacher Education 646, or equivalent graduate level course and consent of graduate coordinator.
Theory and practice of statistical inference for research in education. Probability and sampling theory, data collection and organization, computer applications in educational research, statistical significance testing and prediction, use of statistical computer program libraries.

ED 822. Seminar in Analysis and Issues in Race and Ethnic Relations (3)
Prerequisite: Education 801.
Analysis of race and ethnic relations in education from a theoretical, research, and action based perspective. Conceptual framework of race, ethnicity, and prejudice theory needed for policies and strategies of reform in education to address unequal race relations.

ED 823. Seminar in Action Oriented Policy Research in Multicultural Contexts (3)
Prerequisite: Education 801.
Multidimensional ways to resolve social problems. Development of community based issues, analysis, research and implementation.

ED 824. Seminar in Institutional Change in Multicultural Contexts (3)
Prerequisite: Education 801.
Sociocultural dynamics of urban context, approaches for assessing institutional effectiveness, and strategies for developing and implementing educational innovations. Conceptual understanding of educational and social innovations that address multicultural context of school communities.

ED 827. Seminar in Communication and Cognition in Education (3)
Prerequisite: Admission to doctoral program.
Roots of communication in a diverse society. Relationship between cognition and communication including mass media, as well as cross-cultural, and personal modes.

ED 834. Design and Development of Technology-Based Learning Systems (3)
One lecture and four hours of activity.
Prerequisite: Education 810.
Theories, frameworks, and strategies for designing educational products and technology-based learning systems. Development, assessment, and implementation of proposals and specifications for technology-based learning and performance improvement across diverse settings and learners.

ED 836. Research and Writing Support (2-3) Cr/NC
Prerequisite: Admission to educational leadership doctoral program.
Identification and clarification of a researchable problem in PreK-12 and community college leadership; analysis of related literature, investigation of possible methodology; application to Institutional Review Board. Maximum credit nine units.
ED 840. Seminar in Leadership in a Diverse Society (3)
Prerequisite: Admission to educational leadership doctoral program.
Theories and practices for achieving schools informed by and built around participation of diverse communities and cultures. Intersection of leadership with socio-historical, socio-cultural, and social justice theories.

ED 850. Seminar in Quantitative Methods of Inquiry (3)
Prerequisites: A master's level course in research methods and admission to doctoral program.
Inquiry and empirical research in educational settings within public schools, postsecondary institutions, and public and private sector educational organizations, culminating in a dissertation proposal.

ED 851. Seminar in Qualitative Methods of Inquiry (3)
Prerequisites: A master's level course in research methods and admission to doctoral program.
Theory and methods of qualitative research and evaluation. Computer applications in qualitative research. Match methodology to research settings in education; design a research or evaluation proposal; collect and analyze data; and present results of qualitative study.

ED 855. Seminar in Leadership for Developing Educational Systems (3)
Prerequisite: Admission to educational leadership doctoral program.
Skills and processes to lead the development of educational systems. Development of educational systems into learning organizations through organizational communications, adult learning, and professional development.

ED 860. Seminar in Leadership and Educational Change (3)
Prerequisite: Admission to educational leadership doctoral program.
Complexities of educational change. Models of organizational change and specific leadership skills and strategies; action plans for educational leadership challenges.

ED 885. Seminar in Educational Program Planning and Evaluation (3)
Prerequisite: Admission to educational leadership doctoral program.
Effective monitoring of and evaluating systems for educational program improvement and policymaking. (Formerly numbered Educational Leadership 885.)

ED 895. Seminar (1-8)
Prerequisite: Admission to the doctoral program or consent of the graduate coordinator.
Investigation of a particular topic or issue, emphasis on empirical research in education. See Class Schedule for specific content. Maximum credit eight units applicable to an advanced degree.

ED 897. Doctoral Research (1-15) Cr/NC/RP
Prerequisite: Admission to the doctoral program.
Independent investigation in the general field of the dissertation.

ED 899. Doctoral Dissertation (3-15) Cr/NC/RP
Prerequisites: An officially constituted dissertation committee and advancement to candidacy.
Preparation of the dissertation for the doctoral program. Enrollment is required during the term in which the dissertation is approved.

CREDENTIAL COURSES

ED 970. Teaching Event Assessment (3) Cr/NC
Prerequisite: Admission to teacher education or policy studies in language and cross-cultural education multiple or single subject credential program.
Tasks required for performance assessment teaching event: context of learning, planning instruction and assessment, instructing students and supporting learning, assessing student learning, and reflecting on teaching and learning.

ED 997. Special Topics in Education (0.5-6)
(Offered only in Extension)
Prerequisite: Consent of instructor.
Designed to meet the needs of teachers who wish to develop or continue the study of a current topic. May be repeated with new content.
Administration, Rehabilitation and Postsecondary Education

In the College of Education

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Shaila D. Mulholland, Ph.D., Assistant Professor of Administration, Rehabilitation and Postsecondary Education

Courses Acceptable on Master's and Doctoral Degree Programs in Education (ARP)
Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

UPPER DIVISION COURSES
ARP 565. Psychological Foundations of Adult and Vocational Education (3)
Prerequisite: Administration, Rehabilitation and Postsecondary Education 380 or 381
Learning processes of adult and vocational education students in relationship to theories of learning and methods of teaching.
ARP 568. Adult and Vocational Education in Contemporary Society (3)
Prerequisite: Administration, Rehabilitation and Postsecondary Education 565
Contemporary adult and vocational education in the U.S. Learning opportunities and environments, instructional delivery systems, and adult learning models.
ARP 596. Topics in Administration, Rehabilitation and Postsecondary Education (1-3)
Selected topics in administration, rehabilitation and postsecondary education. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES
ARP 607. Applications of Rehabilitation Technology (3)
Prerequisite: Admission to rehabilitation counseling program or consent of instructor.
Provide rehabilitation professionals with knowledge and skills to assess assistive technology needs of individuals with disabilities and match those needs with appropriate adaptations, equipment, and/or resources to expand employment and related quality of life opportunities. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 585.)
ARP 610. Educational Leadership (3)
Concepts and techniques of leadership, analysis of the factors and practice of individual and group leadership as applied to educational and related environments.
ARP 611. Program Development and Evaluation in Postsecondary Education (3)
Prerequisite: Consent of instructor.
Process of program development, change, improvement and evaluation for postsecondary education. Covers instructional programs, curriculum development, and student services programming. Includes designing instructional strategies to meet student learning needs.
ARP 615. Seminar in Multicultural Dimensions in Rehabilitation Counseling (3)
Prerequisite: Admission to graduate program in rehabilitation counseling.
Issues, insights, and techniques for improving effectiveness in working with culturally diverse individuals with disabilities and their families. Focuses on insuring culturally appropriate and relevant rehabilitation services including full community integration.
ARP 620. Student Affairs in Higher Education (3)
Historical roots, diversity of institutions and students; philosophical foundations of the field, guiding values, key legal principles and theoretical bases; functional areas within student affairs, their evolution, purpose, professional associations, standards, and current issues.
ARP 621. Theoretical Foundations of Student Affairs (3)
Prerequisite: Consent of instructor.
Major theoretical foundations of student affairs, including student personnel point of view, student development, and student learning imperative.
ARP 622. Communication and Group Process in Student Affairs Leadership (3)
Prerequisite: Consent of instructor.
Four major domains of communication and leadership: interpersonal, intrapersonal, small group, and organizational dynamics. Addresses assessment of techniques and intervention strategies for each domain.
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 646. Group Dynamics in Rehabilitation (3)
Prerequisite: Admission to graduate program in rehabilitation counseling.
Theory, dynamics, process and leadership function as applied to group work in rehabilitation. Development and application of group leadership skills/techniques for adjustment, support, skill training, self-directed groups, organizational problem solving and team-building groups in rehabilitation.

ARP 660. Theory and Process of Counseling in Rehabilitation (3)
Counseling theories, approaches to and techniques for counseling, and research concerning counseling effectiveness.

ARP 680. Seminar in Administration, Rehabilitation and Postsecondary Education (2-6)
Prerequisite: Consent of instructor.
Study of administration, rehabilitation, or postsecondary education in a specialized field, such as a postsecondary institution, and subject fields, or designated services. Field experience when appropriate. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

ARP 684. Rehabilitation Foundations (3)
Background and legislation related to vocational rehabilitation, consumer services, role and function of rehabilitation counselor as a professional. Orientation to community rehabilitation agencies. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 584.)

ARP 685A-685B. Medical and Psychological Aspects of Disability (3-3)
Prerequisite: Open to rehabilitation graduate students and practitioners.
Interface of the individual and the environment covering disabilities from the perspective of each disability viewed in terms of functional capacities and rehabilitative services needed.

ARP 687. Placement Practices with Individuals with Disabilities (3)
Prerequisite: Admission to the graduate program in rehabilitation counseling.
Determination of employment and community integration needs of individuals with disabilities. Theories and techniques are presented through case study methods. Strategies focus on continuous surveys and readings focus on employment needs and opportunities for individuals with disabilities.

ARP 696. Advanced Topics in Administration, Rehabilitation and Postsecondary Education (1-3)
Prerequisite: Twelve units in administration, rehabilitation and postsecondary education.
Intensive study in specific areas of administration, rehabilitation and postsecondary education. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

ARP 710A-710B. Seminar in Rehabilitation (3-3)
Prerequisite: Completion of at least 24 units leading to Master of Science in rehabilitation counseling or enrollment in Rehabilitation Administration Certificate.
Selected topics with emphasis in research in rehabilitation counseling and/or administration. See Class Schedule for specific content.

ARP 720. Human Resource Development in Postsecondary Education (3)
Prerequisite: Consent of instructor.
Human resource development including selection and evaluation of staff, contract management, and staff development. Personnel managerial styles, staff leadership, and motivation techniques as to morale and productivity. Analysis of educational personnel systems and employee programs.

ARP 725. Seminar: Institutional Planning, Analysis, and Assessment (3)
Prerequisite: Administration, Rehabilitation and Postsecondary Education 727.
Knowledge and skills for utilizing institutional and national data for student recruitment and institutional planning.

ARP 727. Emerging Issues in Postsecondary Educational Leadership (3)
Prerequisite: Consent of instructor.
Identification and analysis of emerging local, national, and international issues impacting education.

ARP 730. Seminar in Adult Learning (3)
Patterns and implications of life-long learning. Emphasizes adult learning principles and styles, effects of adult development changes on learning, and teaching techniques in adult education programs.

ARP 740. Advanced Seminar in Administration, Rehabilitation and Postsecondary Education (3)
Prerequisite: Consent of instructor.
Study of a selected area in administration, rehabilitation or postsecondary education, such as educational law, finance, super-vision, personnel procedures, etc. May be repeated with new content. See Class Schedule for specific content. Maximum credit nine units applicable to a master's degree.

ARP 743. Fieldwork in Rehabilitation (3-6) Cr/NC
Prerequisite: Admission to graduate program in rehabilitation counseling.
Orientation to the rehabilitation process including organizational goals, operating strategies, responsibilities and ethics, employee role expectations in partnership with consumers and service providers. Maximum credit six units applicable to a Master of Science degree in rehabilitation counseling.
ARP 744. Practicum in Rehabilitation (3-12) Cr/NC
Prerequisite: Admission to graduate program in rehabilitation counseling.
Clinical supervision within rehabilitation systems as it relates to outreach and referral, career development, counseling, and caseload management. Maximum credit 12 units applicable to a Master of Science degree in rehabilitation counseling.

ARP 745. Internship in Rehabilitation (3-9) Cr/NC
Prerequisite: Completion of at least 24 units leading to Master of Science in rehabilitation counseling.
Supervised internship in rehabilitation setting which involves application of rehabilitation counseling experiences. Maximum credit of nine units applicable to a Master of Science degree in rehabilitation counseling or enrollment in the Rehabilitation Administration Certificate.

ARP 746. Seminar in Rehabilitation with Consumers Who Are Deaf and Hard of Hearing (3)
Prerequisite: Consent of instructor.
Characteristics and needs of deaf and hard of hearing consumers. Procedures for collaborating with consumers to develop effective rehabilitation plans, supported employment, independent living and cross-cultural counseling through American sign language.

ARP 747. Educational Leadership in a Diverse Society (3)
Prerequisite: Consent of instructor.
Current theory and practice in meeting needs of diverse learners. Leadership and administration of educational organizations as political, complex systems requiring consensus-building dynamics in a multicultural society.

ARP 755. Governance and Policy Development in Postsecondary Learning Organizations (3)
Prerequisite: Consent of instructor.
Development of educational policy and impact of politics in governance and administration; control functions of federal, state, and local agencies; influence of lay citizens and special interest groups; roles of judiciary, employee organizations and students.

ARP 760. Internship in Postsecondary Educational Leadership (1-6) Cr/NC/RP
Prerequisite: Consent of instructor.
Internship for prospective educational leaders. Released time may be required. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

ARP 798. Special Study (1-6) Cr/NC/RP
Prerequisites: Consent of instructor; to be arranged with department chair and instructor. May involve fieldwork. Individual study. Maximum credit six units applicable to a master’s degree.

DOCTORAL COURSES

ARP 801. Seminar in Community College History and Development (3)
Prerequisite: Admission to educational leadership doctoral program. Mission, functions, organization, student characteristics, and problems with community college operations. Future trends in community college operations and need for new leadership and research opportunities.

ARP 810. Seminar in Community College Law and Finance (3)
Prerequisite: Administration, Rehabilitation and Postsecondary Education 801. Legal framework for operating community colleges in California. Community college finance system including state and local contributions to funding.

ARP 811. Seminar in External Partnerships for Community Colleges (3)
Prerequisite: Administration, Rehabilitation and Postsecondary Education 801. Working with statewide and community groups, organizations, and boards of trustees to establish partnerships that nurture diversity, promote student success, and sustain community college mission. Economic development mission of community colleges in the local community.

ARP 812. Seminar in Budget and Resource Management in Community Colleges (3)
Prerequisite: Administration, Rehabilitation and Postsecondary Education 801. Equitably and ethically managing, sustaining, and acquiring human, fiscal, and information resources, as well as assets to fulfill mission of the community college and postsecondary education institutions. Financial strategies and human resource systems and conflict resolution.

ARP 813. Strategic Planning in Community Colleges (3)
Prerequisite: Administration, Rehabilitation and Postsecondary Education 801. Knowledge-based strategic planning to maximize student success in community colleges and postsecondary educational institutions. Board-administrator relationship development and use of data-driven evidence for decision-making.

ARP 827. Seminar in Emerging Issues in Postsecondary Educational Leadership (3)
Prerequisite: Admission to educational leadership doctoral program. Identification and analysis of complex emerging local, national, and international issues that face high level postsecondary educational leaders.
Counseling and School Psychology

In the College of Education

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Courses Acceptable on Master's Degree Programs in Counseling (CSP)

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

UPPER DIVISION COURSE

CSP 596. Selected Studies (1-3)
Prerequisite: Consent of instructor.
A series of lecture and discussion sessions centering on current problems in counseling and guidance. Designed to serve the needs of any person desiring to keep informed of developments in this area. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES

CSP 600. Cross-Cultural Counseling Communication Skills (2)
Prerequisite: Concurrent registration in Counseling and School Psychology 600L.
Concepts underlying effective cross-cultural counseling practice and interpersonal communication. Development of skills basic to practice of counseling, consultation, and marriage-family therapy.

CSP 600L. Cross-Cultural Counseling Prepracticum (1) Cr/NC
Prerequisite: Credit or concurrent registration in Counseling and School Psychology 600.
Development of self-understanding. Cross-cultural communication skills needed for becoming an effective counselor. May be repeated with new content. Maximum credit three units applicable to a master's degree in counseling.

CSP 601. Theoretical Foundations of Counseling and Marriage and Family Therapy (3)
Prerequisites: Counseling and School Psychology 600 and 600L. Counseling and marriage and family therapy theories and their impact on the practices of counselors, school counselors, school psychologists, marriage-family therapists and their clients. Approaches and applications for counseling and therapy. Research on counseling and marriage and family therapy.

CSP 606. Professional Issues in Mental Health Practice (3)
Prerequisites: Counseling and School Psychology 600 and 600L. Legal, ethical, and professional issues in counseling and marriage and family therapy practice, research, and training. Cultural underpinnings and clinical implications of legal and ethical codes. (Formerly numbered Counseling and School Psychology 607A-607B.)
A. Marriage and Family Therapy
B. Community-Based Block

CSP 609. Family Life Cycle Development (3)
Prerequisites: Counseling and School Psychology 600 and 600L. Family development examined within sociocultural and temporal contexts. Addresses predictable and crisis transitions and implications for family therapy treatment.

CSP 610. Determinants of Human Behavior (1-3)
Implications of theory and research in behavioral sciences for the understanding of human behavior.
A. Personality
B. Social and Cultural
C. Development
D. School Learning
E. Biological

CSP 611. Seminar in Determinants of Human Behavior: Trauma (3)
(Offered only in Extension)
Prerequisite: Bachelor's degree.
Historical and philosophical origins of current theories and practices. Types of trauma affecting children, communities of color, elderly, crime victims, and others. Implications for treatment considered.

CSP 615. Seminar in Multicultural Dimensions in Counseling (3)
Issues, insights, and techniques for improving effectiveness in working with culturally diverse populations.

CSP 616. Seminar in Alternative, Indigenous, and Community Healing Modalities: Trauma (3)
(Offered only in Extension)
Prerequisite: Bachelor's degree.
Different healing modalities reflecting different world views. Indigenous, modern, and non-western alternative theories, practices, and techniques.
CSP 618. Contexts of Psychopathology (3)
Prerequisite: Counseling and School Psychology 601.
Descriptions of mental health disorders within biological, individual, familial, and larger social contexts. Focus on Diagnosis and Statistical Manual of Mental Disorders classification system and relationship to family functioning.

CSP 620. Guidance Services in Public Education (3)
Historical, philosophical and legal bases of pupil personnel services; staff roles and relationships in a variety of organizational patterns.

CSP 622A. Ecosystems Assessment - Intervention I: Students (3)
Prerequisites: Counseling and School Psychology 600 and 600L. Concurrent registration in Counseling and School Psychology 740.
Ecosystemic theory and models for assessment - intervention services to individual students in multicultural schools. Ecological data-gathering methods (e.g. record reviews, interviews, observation), community, school, family and cultural influences on student’s situation. Evaluation of intervention effectiveness.

CSP 622B. Ecosystems Assessment - Intervention II: Schools (3)
Prerequisites: Counseling and School Psychology 600. 600L, 622A. Concurrent registration in Counseling and School Psychology 740.
Ecosystemic models and methods for assessment, intervention, and delivery of support services to multicultural schools. Roles of school psychologists and school counselors facilitating teaching-learning, Evaluating needs and outcomes with implications for interventions, programs, and school practices.

CSP 623. Ecobehavioral Assessment - Intervention (3)
Prerequisites: Counseling and School Psychology 622B. Concurrent registration in Counseling and School Psychology 730 or 740.

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.

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
Prerequisites: Counseling and School Psychology 641.
Theories and concepts underlying psychoeducational evaluation in multicultural schools. Administration and interpretation of instruments and techniques for psychoeducational evaluation of children and adolescents.
A. Psychological Processing
B. English – Learners
C. Spanish – Speakers (proficiency required)

CSP 644. Academic Assessment - Intervention (3)
Prerequisites: Counseling and School Psychology 622A and 641. Concurrent registration in Counseling and School Psychology 730 or 740.
Current concepts of prevention and intervention strategies for students placed at risk for academic difficulties in multicultural schools. Skills in assessment of academic achievement (standardized and authentic), linked to empirically supported intervention strategies, evaluation of intervention effectiveness.

CSP 645. Career Development (1)
Prerequisites: Counseling and School Psychology 620 and admission to school counseling program.
Theories, methods, and models of career assessment and comprehensive career development programs in K-12 multicultural school settings. Role of school counselor as developer and coordinator of activities, resources, and school-to-work opportunities.

CSP 646. Seminar in Models and Methods of Intervening: Trauma (3)
(Offered only in Extension)
Prerequisites: Counseling and School Psychology 611 and 661.

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 interdependence, power, intimacy, generational patterns,  
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,  
isues 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 symptomology, and professional and ethical issues.  

CSP 691. Violence in Couples’ Relationships (1)  
Prerequisite: Counseling and School Psychology 625.  
Socio-cultural, developmental, family and individual contexts of  
violence in couples’ relationships. Assessment with a focus on systemic  
ideas and practices. Legal, ethical, and person-of-the-  
therapist influences on assessment. Fulfills marriage and family  
therapy licensure requirement.  

CSP 692. Seminar in Couples in Therapy (2)  
Prerequisites: Counseling and School Psychology 609, 625, 625L.  
Explores and applies theory and practice of therapy with couples  
in premarital, marital, non-marital, divorce, recoupment, 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, spiritu-  
ality, technology and therapy. May be repeated with new content. Maximum credit six units.  

CSP 694. Psychopharmacology for Marriage and Family Therapists (2)  
Prerequisite: Counseling and School Psychology 618.  
Medical, cultural, systemic perspectives on use of psychopharma-  
cology in marriage and family therapy practice. Overview of most  
commonly used drugs in psychotherapeutic treatment. Fulfills  
marriage and family therapy licensure requirement.  

CSP 696. Selected Topics in Counseling and School Psychology (1-3)  
Prerequisite: Consent of instructor.  
Intensive study in specific areas of counseling and school psychology. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.  

CSP 697. Special Topics in Trauma Studies (1)  
(Offered only in Extension)  
Prerequisite: Bachelor’s degree.  
Variable topics: addressing issues of trauma and special populations. Examples include: Grief and loss in refugee children; children and families as victims of crime; intergenerational trauma and Jewish holocaust survivors; Native American transgenerational traumatic stress and emergent interventions; African American behavioral change model. Maximum credit three units.  

CSP 710A-710B. Professional Seminar (3-3)  
Prerequisites: Education 690. Six units from Counseling and School Psychology 601, 640, and 670.  
Study of selected areas in counseling, marriage and family therapy, school counseling, or school psychology culminating in a written project with emphasis on counseling as a profession. May be repeated with new content. See Class Schedule for specific content. Maximum credit nine units applicable to a master’s degree.  

CSP 730. Fieldwork in Counseling (2-6) Cr/NC  
Prerequisites: Counseling and School Psychology 601 or 662 or 670.  
Application of concepts and procedures of counseling, school counseling, or school psychology services in appropriate school or agency setting. Daily observation and practice. Weekly seminar sessions with university staff. Application to take the course must be made early during the preceding semester. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree in counseling.  

CSP 731. Trauma Studies Field Supervision (1-3) Cr/NC  
(Offered only in Extension)  
Prerequisites: Counseling and School Psychology 611, 646, 661,  
and consent of program director.  
Application of concepts and procedures of interventions and/or referral in appropriate school or agency setting. Observation and practice under supervision. Weekly consultation with university staff.  

CSP 740. Practicum (1-6) Cr/NC  
Prerequisite: Counseling and School Psychology 601.  
Supervised experience in counseling, school counseling, or school psychology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree in counseling.  

CSP 741. Practicum: Group Counseling (3) Cr/NC  
Prerequisite: Counseling and School Psychology 670.  
Supervised experience in group counseling and/or career planning. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.  

CSP 744. Cognitive Assessment - Intervention (3)  
Prerequisites: Counseling and School Psychology 641 and 644.  
Theories underlying cognitive assessment. Implications for school learning. Collaborative consultation with teachers regarding instruc- 
tional and academic interventions in multicultural schools. Administration and interpretation of cognitive assessment techniques used by school psychologists. Design, implementation, and evalu- 
ation of interventions. Effective report writing.
CSP 745. Program Development and Evaluation in Pupil Services (3)
Prerequisites: Counseling and School Psychology 620, 730, and Education 690.
Development, management, and evaluation of pupil services in schools. Analysis of models and practice in planning.

CSP 746. Dynamic Assessment and Mediated Interventions (3)
Three hours of clinical practice.
Prerequisites: Counseling and School Psychology 610D and 744.

CSP 752. Seminar and Practicum: School Psychology (3-6) Cr/NC
Nine hours of practicum for three units.
Prerequisite: Counseling and School Psychology 730.
School psychology in multicultural school settings; implications for standard and innovative school psychology practices.

CSP 755. Practicum I: Marriage and Family Therapy (3) Cr/NC
Prerequisites: Counseling and School Psychology 625 and 625L.
Advanced 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 emphasis on research, problems and/or issues. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

CSP 762. Prevention, Crisis Intervention, and Conflict Resolution in Schools (3)
Prerequisites: Counseling and School Psychology 622B and 662.
Examination, design, implementation, and evaluation of wellness, prevention, intervention, and other mental health programs at individual, group, and system levels in schools. Focus on roles for school support personnel in promoting wellness and resiliency and intervening in school settings.

CSP 765. Practicum II: Marriage and Family Therapy (3) Cr/NC
Prerequisite: Counseling and School Psychology 755.
Advanced supervised experience in relationship and family therapy under live supervision. Advanced techniques and treatment planning. Clinical hours may be counted toward 500 clinical hours and marriage and family licensure eligibility requirement. May be repeated with additional clinical training experience. Maximum credit three units applicable to a master’s degree.

CSP 770. Advanced Seminar in Counseling (3)
Prerequisite: Advancement to candidacy or counseling experience.
Selected areas in counseling culminating in a written project with emphasis on research, problems, and issues. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

CSP 780. Internship (2-12) Cr/NC
Prerequisite: Counseling and School Psychology 730.
Supervised internship experience in counseling or school psychology activities. Application to take the course must be made early during the preceding semester. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree. Maximum credit 24 units applicable to the specialization in school psychology.

CSP 785. Marriage and Family Therapy Traineeship (1-10) Cr/NC
Prerequisite: Counseling and School Psychology 755.
Community-based clinical marriage and family therapy experience, with AAMFT approved supervisor or equivalent. Individual and group supervision at site and on campus. Clinical hours may be counted toward 500 clinical hours and marriage and family therapy licensure eligibility requirement. May be repeated with new content. Maximum credit ten units.

CSP 790A. Specialist’s Project in School Psychology (3) Cr/NC
Prerequisite: Advancement to candidacy for the Ed.S. degree. Preparation of an applied research project for the educational specialist degree in school psychology.

CSP 790B. Specialist’s Project Extension (3) Cr/NC
Prerequisite: Grade symbol of RP in Counseling and School Psychology 790A.
Registration required in any semester or term following assignment of RP in Counseling and School Psychology 790A in which the student expects to use the facilities and resources of the university. Student must be registered in the course when the completed project is granted final approval.

CSP 798. Special Study (1-6) Cr/NC/RP
Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units applicable to a master’s degree. May involve fieldwork.

CSP 799A. Thesis (3) Cr/NC/RP
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a thesis for the Master of Science degree in counseling.

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

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

In the College of Education

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Faculty
Patti L. Chance, Ph.D., Professor of Educational Leadership, Chair of Department
Margaret R. Basom, Ph.D., Professor of Educational Leadership, Emerita
Kathleen C. Cohn, Ph.D., Professor of Educational Leadership, Emerita
Joseph F. Johnson, Ph.D., Professor of Educational Leadership
Lionel R. Meno, Ph.D., Professor of Educational Leadership, Emeritus
Ian R. Pumphian, Ph.D., Professor of Educational Leadership
Cynthia L. Uline, Ph.D., Professor of Educational Leadership, Co-Director of Ed.D. in Educational Leadership with Concentration in PreK-12 School Leadership
Cheryl M. James-Ward, Ed.D., Assistant Professor of Educational Leadership
Kathryn A. Singh, Ed.D., Assistant Professor of Educational Leadership

Courses Acceptable on Master's and Doctoral Degree Programs in Education (EDL)

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

UPPER DIVISION COURSE
EDL 596. Topics in Educational Leadership (1-3)
Selected problems in educational leadership. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES
EDL 600. Principles of Educational Administration (3)
Prerequisites: Admission to Preliminary Administrative Services Credential program and classified graduate standing. Educational administration and leadership as a profession. Related organizational concepts and management theories. Principles and competencies for leadership and administrative practice as each relates to the aspiring school administrator. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 600.)

EDL 610. Educational Leadership in PreK-12 Educational Organizations (3)
Prerequisites: Admission to Preliminary Administrative Services Credential program and classified graduate standing. Concepts and techniques of leadership, analysis of factors and practice in procedures of individual and group leadership as applied to preK-12 educational environments.

EDL 620. Seminar in Educational Facility Community Engagement and Master Planning (2)
Prerequisite: Admission to Certificate in Educational Facility Planning. Models of community partnership processes, methods for determining accurate enrollment projections, and stages, timelines, and processes for designing and implementing a school facility project.

EDL 621. Seminar in Designing Schools to Support Diverse Learning Style Needs (2)
Prerequisite: Admission to Certificate in Educational Facility Planning. Linking school design to learning and teaching styles, enhancing opportunities for differentiated instruction within classrooms.

EDL 622. Seminar in Educational Facility Pre-Design Planning (2)
Prerequisite: Admission to Certificate in Educational Facility Planning. Components of school facility pre-design planning, processes for deriving essential information, strategies for documenting detail, and means to connect planning with design.

EDL 623. Seminar in Educational Facility Design Process (2)
Prerequisite: Admission to Certificate in Educational Facility Planning. Architectural/engineering design process of school facilities, including who is involved, how they are involved, when, why, and intended outcomes of process.

EDL 624. Seminar in Educational Facility Implementation (2)
Prerequisite: Admission to Certificate in Educational Facility Planning. School facility capital project management from initial conception through planning, design, construction, and post-occupancy phases, presenting various project delivery models and defining role of stakeholders in each phase.

EDL 625. Seminar in Educational Facility Assessment and Maintenance (2)
Prerequisite: Admission to Certificate in Educational Facility Planning. Purpose and methods of school facility life cycle assessment, indicators of quality, assessment instruments, maintenance programs as an assessment tool, and procedures and policies for institutionalizing assessment.

EDL 630. Curriculum Design and Management (3)
Prerequisites: Admission to Preliminary Administrative Services Credential program and classified graduate standing. Administrator's role in curriculum leadership and management in elementary, middle, and secondary school; emphasis on interrelationships within levels; supervision of curricular and supervisory personnel; use of research in curriculum development and implementation. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 630.)

EDL 640. Educational Leadership in School Community Relations (3)
Prerequisites: Admission to MA degree or tier 1 credential program; Educational Leadership 600 and 610. Increasing family and community involvement in schools. Improving student achievement through using educational leadership strategies and resources.
EDL 652. Seminar in Instructional Improvement and Evaluation (3)
Prerequisites: Admission to Preliminary Administrative Services Credential program and classified graduate standing.
Improvement of instruction through application of principles and practices in assessment of teaching competency; development of teaching profiles; leadership skills in working with teachers to improve performance. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 652.)

EDL 655. Communication, Problem Solving, and Decision Making in PK12 (3)
Prerequisites: Admission to Preliminary Administrative Services Credential program and classified graduate standing.
Educational leadership principles and practices for communication, problem solving, and decision making in preK-12 schools and educational organizations. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 655.)

EDL 660. Field Experience in Educational Leadership (1-6) Cr/NC/RP
Prerequisites: Educational Leadership 680 and classified graduate standing in the educational administration program.
Supervised field experience in schools or other educational settings. Monthly sessions with university faculty. Application to take this course must be made during preceding semester. Maximum credit 10 units of which 4 units are applicable to a master’s degree. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 660.)

EDL 680. Seminar in PreK-12 Educational Administration (2-6) Cr/NC
Prerequisite: Consent of instructor.
Educational administration in preK-12 schools and school districts. Field experience when appropriate. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

EDL 699. Advanced Topics in Educational Leadership (1-3)
Intensive study in specific areas of educational leadership. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

EDL 707. Educational Law and Finance (3)
Prerequisites: Completion of a graduate degree and approval of department.
Legal and financial aspects of educational administration including implications for policy formulation in the areas of personnel, instruction, and resource management. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 707.)

EDL 720. Human Resource Development in PreK-12 Educational Organizations (3)
Prerequisites: Completion of a graduate degree and approval of department.
Human resource management in preK-12 educational administration including selection and evaluation of staff, contract management, and staff development. Personnel managerial styles, staff leadership, and motivation techniques as to morale and productivity. Analysis of educational personnel systems and employee assistance programs.

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

EDL 760. Practicum in PreK-12 Educational Organizations (2-6) Cr/NC/RP
Prerequisite: Consent of instructor.
Internship for preK-12 educational administrators. Application to take this course must be made in the preceding semester by preregistration with the credential program coordinator. Released time may be required. May be repeated. Maximum credit 12 units applicable to the Professional Administrative Services Credential.

EDL 798. Special Study (1-6) Cr/NC/RP
Prerequisite: Consent of staff; to be arranged with department chair and instructor. May involve fieldwork.
Individual study. Maximum credit six units applicable to a master’s degree.

DOCTORAL COURSES
EDL 800. Leadership Research Practicum (0.6-1.3) (1-2 quarter units) Cr/NC
Prerequisites: Admission to the SDSU/UCSD/CSUSM doctoral program and concurrent registration in one of the following courses: Educational Leadership 830 or Education 815, 840, 855.
Participation and observation of leadership practices in local schools and educational settings.

EDL 830. Leadership for Learning (3)
Prerequisite: Admission to educational leadership doctoral program.
Models of curriculum, instruction, and school organization. The leader’s role and responsibility in developing evidence-based decision making cultures that promote student achievement.

EDL 855. Advanced Educational Leadership Research Practicum (1.3) (2 quarter units)
Prerequisites: Admission to SDSU/UCSD/CSUSM doctoral program and concurrent registration in Education 855.
Participation and observation of leadership practices in local schools and educational settings.

EDL 880. Seminar in Topics in Educational Leadership (3)
Prerequisite: Admission to educational leadership doctoral program.
Topical issues in field of educational leadership that have broad implications for research and practice in educational leadership. Maximum credit six units applicable to Ed.D. in educational leadership.

EDL 899. Doctoral Dissertation (1-15) Cr/NC/RP
(0.6-1.3) (1-2 quarter units)
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.
Faculty
Marcie J. Bober-Michel, Ph.D., Professor of Educational Technology, Chair of Department (Graduate Adviser)
Bernard J. Dodge, Ph.D., Professor of Educational Technology
Robert P. Hoffman, Ph.D., Associate Professor of Educational Technology
Minjuan Wang, Ph.D., Associate Professor of Educational Technology

Courses Acceptable on Master's Degree Program in Education (EDTEC)

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

UPPER DIVISION COURSES

EDTEC 532. Producing Digital Learning Media (1-3)
Two hours of activity per unit.
Digital learning media production for professionals in health, law, science, business, publishing, and other settings. Use of web- and video-based technologies, presentation, and data analysis tools for training and education. Not open to students in educational technology master's degree or certificate programs.

EDTEC 540. Educational Technology (3)
Six hours of activity.
Rationale, foundations, theories, careers, trends, and issues in educational technology. Implications of educational technology for instruction and information in schools, government, and corporations.

EDTEC 541. Educational Web Development (3)
One lecture and six hours of laboratory.
Prerequisite: Basic computer literacy.
Systems, graphic design, and usability principles applied to design and development of web-based educational multimedia. Planning and prototyping digital media.

EDTEC 544. Instructional Design (3)
One lecture and six hours of laboratory.
Prerequisite: 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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(Graduate Adviser)
Alberto M. Ochoa, Ph.D., Professor of Policy Studies in Language and Cross-Cultural Education, Emeritus
Alberto J. Rodriguez, Ph.D., Professor of Policy Studies in Language and Cross-Cultural Education
Cristina Alfaro, Ph.D., Associate Professor of Policy Studies in Language and Cross-Cultural Education
Elsa S. Billings, Ph.D., Assistant Professor of Policy Studies in Language and Cross-Cultural Education

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

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

UPPER DIVISION COURSES

PLC 515. Multilingual Education: Theory and Practice for Biliteracy Teachers (3)
Pedagogical and programmatic practices for addressing linguistic and academic needs of multilingual learners. Historical and theoretical foundations of bilingual education as related to bilingual and dual language programs to include instruction, curriculum, and assessment. Taught in Spanish and English.

PLC 523. Psychological Foundations for Biliteracy Teachers in K-6 Classrooms (3)
Major theories of learning and cognition as applied to bilingual students and their relation to child development, first and second language acquisition, and approaches to teaching in bilingual classroom. (Formerly numbered Policy Studies in Language and Cross-Cultural Education 923.)

PLC 524. Psychological Foundations for Biliteracy Teachers in Grades 7-12 (1-4)
Bilingual learning theory as it affects adolescent growth, individualized instruction, classroom management and discipline, and methods of measuring and evaluating achievement. Taught in Spanish and English. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units. (Formerly numbered Policy Studies in Language and Cross-Cultural Education 924.)

PLC 532. Biliteracy Teaching in Language Arts for Elementary Students (3)
Prerequisites: Policy Studies in Language and Cross-Cultural Education 415 and 515.
Assessing language proficiency; selecting, designing, and evaluating learning experiences to develop biliteracy in K-6 classrooms in English language arts and Spanish, Arabic, Filipino, Japanese, or Mandarin. Taught bilingually in language of emphasis and English. (Formerly numbered Policy Studies in Language and Cross-Cultural Education 932.)

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

PLC 596. Special Topics in Bilingual and Multicultural Education (1-3)
Prerequisite: Consent of instructor.
Selected topics in bilingual, cross-cultural education and policy studies. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES

PLC 600A. Foundations of Democratic Schooling (3)
Prerequisite: Consent of instructor.
Analysis of relationships among ideology, culture, and power in educational context; key concepts in critical pedagogy applied to programs, curricula, and school restructuring. (Formerly numbered Policy Studies in Language and Cross-Cultural Education 600.)

PLC 600B. Foundations of Dual Language Programming for Critical Biliteracy Development (3)
Prerequisite: BCLAD credential or score of 3 on SDSU Spanish examination.
Critical literacy and democratic schooling for dual language program models. Program models that apply to policies and practices that inform literacy curriculum and pedagogy in dual language-biliteracy settings.

PLC 601. Language Policies and Practices (3)
Prerequisite: Consent of instructor.
Formal and informal policies related to education of linguistically diverse students at micro/macro level and in school contexts; analysis of bilingual and cross-cultural issues in cognition and literacy. (Formerly numbered Policy Studies in Language and Cross-Cultural Education 653.)

PLC 602. Culturally Responsive Pedagogy for School Communities (3)
Prerequisite: Policy Studies in Language and Cross-Cultural Education 601.
Examination of diverse cultural competence values and behaviors 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.
Linguistic and cultural diversity of school and community. Development of community sociocultural scan; home and school collaboration; effects of home and school collaboration on achievement; responsibility of parent caretaker, stakeholder for student success.

PLC 604. Learning and Teaching Language in a Dual Language Setting (3)
Prerequisite: BCLAD credential or score of 3 on SDSU Spanish examination.
Dual language instructional methods, modeling oral and written grammatical structures. Language acquisition strategies for English and Spanish in K-12 grades. Emphasis on written structures for academic literacy.
PLC 612. Qualitative Inquiries in Communities and Schools (3)
Prerequisites: Policy Studies in Language and Cross-Cultural Education 600A and Education 690.
Examination and application of qualitative tools of analysis for developing and implementing action research, ethnographic inquiries, case studies, and other qualitative research in classrooms, schools, and communities.

PLC 613. Organizational Strategies and Professional Development for the Multicultural School Community (3)
Prerequisite: Policy Studies in Language and Cross-Cultural Education 601.
Leadership and change strategies for designing and implementing instructional programs, professional development approaches, effective organizational school climate that promotes a democratic society and schooling.

PLC 650. Curriculum Development for Urban School Communities (3)
Prerequisites: Policy Studies in Language and Cross-Cultural Education 600A and 601.
Curriculum development through lens of critical theory. Principles of curriculum and instruction contextualized and with regard to particular educational institutions or work sites from a social justice perspective.

PLC 651. Curriculum, Teaching, and Assessment: ELD and SDAIE (1-3)
Prerequisite: Policy Studies in Language and Cross-Cultural Education 915A or 915B.
English language development and delivery of comprehensive instruction for English learners. Strategies for implementing state adopted instruction programs for ELD in language and content.

PLC 652. Literacy and Language: Critically Examining Curriculum for Teaching and Learning (3)
Prerequisite: Policy Studies in Language and Cross-Cultural Education 650.
Research in literacy and multi-cultural curriculum theories, methods, and teaching connected to community, school, and personal literacies. Literacy practices for educating diverse students; varying definitions of literacy and social-political contexts of literacy curriculum.

PLC 686. Seminar in Multicultural Education (1-6)
Prerequisite: Consent of instructor.
Topics dealing with current issues in multicultural education. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

PLC 798. Special Study (1-6) Cr/NC/RP
Prerequisite: Consent of instructor; to be arranged with department chair and instructor.
Individual study. May involve fieldwork. Maximum credit six units applicable to a master’s degree.

CREDENTIAL COURSES

PLC 902. Professional Portfolio (1) Cr/NC
Prerequisite: Admission to Bilingual 2042 Multiple Subject credential program.
Portfolio development: Components on reflective teaching; models for teaching approaches, strategies, and methodologies in all subject areas. Maximum credit three units.

PLC 903. Bilingual Secondary Student Teacher Seminar (3-4) Cr/NC
Planning and organizing instruction for Spanish/English bilingual and nonbilingual student teaching assignments. Focus on role of the bilingual teacher and discipline specific methods in English, ESL, mathematics, science, social science, and foreign language. Course taught in Spanish and/or English.

PLC 910. Teaching Mathematics to Bilingual Students (1-3)
Prerequisite: Admission to Bilingual 2042 Multiple Subject credential program.
Underlying learning theories for teaching mathematical concepts, computation, and problem-solving skills to bilingual students.

PLC 911. Teaching Social Studies to Bilingual Students (1-3)
Prerequisite: Admission to Bilingual 2042 Multiple Subject credential program.
Conceptual approaches for teaching bilingual social studies curriculum, incorporating sociocultural characteristics of multicultural community, social concepts, and community social issues.

PLC 912. Teaching Science to Bilingual Students (1-3)
Prerequisite: Admission to Bilingual 2042 Multiple Subject credential program.
Strategies for development of process skills and concept acquisition. Methodology for teaching activity-oriented science class bilingually.

PLC 915. Teaching and Learning in the Content Area: English Language Development/SDAIE (1-3)
Prerequisites: Education 451, Policy Studies in Language and Cross-Cultural Education 515, and admission to Bilingual 2042 Single Subject credential program.
Teaching strategies in content specific fields from second language acquisition perspective taken concurrently with student teaching. See Class Schedule for specific content. May be repeated with new content. (Formerly numbered Policy Studies in Language and Cross-Cultural Education 914.)
A. Multiple Subjects
B. Single Subjects
C. Special Education

PLC 931. Skills in Teaching Reading to Bilingual Elementary Students (1-3)
Prerequisite: Admission to Bilingual 2042 Multiple Subject credential program.
Teaching reading in English, including methods, strategies, assessment, materials, and techniques of transition for implementing reading programs in the bilingual classroom.

PLC 933. Skills in Teaching Reading to Bilingual Secondary Students (3)
Prerequisites: Upper division standing. Admission to Bilingual 2042 Single Subject credential program.
Teaching reading in English, including methods, strategies, assessment, materials, and techniques of transition for implementing reading programs in the bilingual classroom.

PLC 953. Language Development in Bilingual Secondary Classrooms (3)
Prerequisite: Admission to Bilingual 2042 Single Subject credential program.
Political, sociocultural, and linguistic aspects of language development in bilingual secondary classrooms. Taught in English and Spanish.

PLC 954. Classroom Organization for Democratic Teaching (1-4)
Prerequisites: Policy Studies in Language and Cross-Cultural Education 400; concurrent registration in Policy Studies in Language and Cross-Cultural Education 524 and 963; admission to single subject bilingual 2042 program.
Classroom organization and democratic processes of education for secondary classrooms; skills and knowledge for bilingual teachers in maintaining effective environments for student learning in the areas of teaching, discipline, management, and curriculum.

PLC 960. Student Teaching Seminar for Bilingual Elementary Students (1-3) Cr/NC
Prerequisites: Policy Studies in Language and Cross-Cultural Education 523 and admission to Bilingual 2042 Multiple Subject credential program.
Bilingual instructional practices, classroom management, curricula discipline, micro-teaching in Spanish and English, legal liability, and daily problems encountered in the bilingual classroom. Taught in English and Spanish. Maximum credit six units.
PLC 961. Student Teaching for Bilingual Elementary Students (1-12) Cr/NC
Prerequisites: Admission to Bilingual 2042 Multiple Subject credential program. Student must provide own transportation to student teaching site.
Field experience at two grade levels in a multicultural setting and a bilingual elementary classroom; student teacher assumes responsibility for planning and instruction for specified time to comply with State requirements. Maximum credit 12 units.

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

PLC 963. Student Teaching for Bilingual Secondary Students I (3-4) Cr/NC
Prerequisites: Policy Studies in Language and Cross-Cultural Education 400; concurrent registration in Policy Studies in Language and Cross-Cultural Education 524 and 954; admission to the single subject bilingual emphasis program. Students must provide own transportation to student teaching site.
On-site, part-time experience to implement bilingual teacher competencies introduced in Policy Studies in Language and Cross-Cultural Education 515, 524, and 954.

PLC 964. Student Teaching for Bilingual Secondary Students II (9-12) Cr/NC
Prerequisites: Policy Studies in Language and Cross-Cultural Education 524 and 963; concurrent registration in Policy Studies in Language and Cross-Cultural Education 903. Students must provide own transportation to student teaching site.
On-site, full-day experience in State approved bilingual and nonbilingual classes to implement teacher competencies as developed in the total professional sequence. Maximum credit 12 units.
Special Education

In the College of Education

OFFICE: North Education 70
TELEPHONE: 619-594-6665
http://edweb.sdsu.edu/SPED/

Faculty
Anne W. Graves, Ph.D., Professor of Special Education,
Chair of Department
Laura J. Hall, Ph.D., Professor of Special Education
José Luis Alvarado, Ph.D., Associate Professor of Special Education
and Associate Dean in the College of Education
(Graduate Adviser)
John R. Johnson, Ph.D., Associate Professor of Special Education
Bonne R. Kraemer, Ph.D., Associate Professor of Special Education
Angela S. McIntosh, Ph.D., Associate Professor of Special Education
Regina Brandon, Ph.D., Assistant Professor of Special Education
Luke Duesbery, Ph.D., Assistant Professor of Special Education
Yasemin Turan Qian, Ph.D., Assistant Professor of Special Education

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

SPED 500. Human Exceptionality (3)
Historical, philosophical, and legal aspects of special education that affect identification and programming for diverse learners with exceptions. Characteristics of individuals with special needs and implications for adapting living and learning environments. Meets special education mainstreaming requirement for all basic teaching credentials.

SPED 501. Typical and Atypical Learning Processes (3)
Prerequisites: Credit or concurrent registration in Special Education 500; concurrent registration in Special Education 502.
Theory, research, and processes in learning in relation to individuals with disabilities. Foundations of learning, development, and intervention.

SPED 502. Field Experiences in General and Special Education (1) Cr/NC
Three hours of observation/participation per week.
Prerequisite: Concurrent registration in Special Education 501.
Observation and participation in general and special education classrooms and related school activities for students with disabilities.

SPED 505. Educational Services for Students with Serious Emotional Disturbance (1)
Prerequisite: Admission to credential program.
Educational needs and services for students with serious emotional disturbance. Classroom interventions and procedures.

SPED 510. Adapting Communication Systems for Students with Severe Disabilities (1)
Prerequisite: Admission to credential program.
Adaptations of communications and communication systems for students with disabilities. Educational strategies that special education teachers can use to augment classroom communications. Alternative approaches to communication for students with moderate/severe disabilities.

SPED 524. Characteristics of Students with Mild/Moderate Disabilities (3)
Prerequisite: Special Education 500.
Historical and philosophical perspectives of programs related to students with mild/moderate disabilities. Research on educational programs, curricular approaches, and characteristics.

SPED 525. Characteristics of Students with Moderate/Severe Disabilities (3)
Prerequisite: Special Education 500.
Historical and philosophical perspectives of programs related to students with moderate/severe disabilities. Research on educational programs, curricular approaches, and characteristics with emphasis on services in context of school reform.

SPED 526. Characteristics and Education of Students with Physical, Health, and Sensory Impairments (3)
Prerequisite: Special Education 500.
Historical and philosophical perspectives, characteristics, needs, and supports for individuals with physical, health, and sensory impairments in educational, home, and community settings. Implications of health concerns for programming.

SPED 527. Special Education in a Pluralistic Society (3)
Prerequisite: Credit or concurrent registration in Special Education 500.
Historical and philosophical perspectives of cultural pluralism in special education and programs related to diverse students with disabilities. Research on curricular approaches and instructional needs. Sociocultural aspects related to disability, race, ethnicity, gender, and language.

SPED 528. Young Children with Disabilities and Their Families (3)
Prerequisite: Special Education 500.
Characteristics, needs, and educational programs and services for infants, toddlers, and preschoolers with disabilities and their families. Legislative requirements, models of service delivery, recommended practices, and family diversity.

SPED 530. Issues in Autism (3)
Definition, etiology, assessment, and instructional practices used to address autism. Historical and current issues.

SPED 534. Classroom Assessment of Students with Mild/Moderate Disabilities (3)
Prerequisite: Admission to credential program.
Classroom assessment in general and special education for students with mild/moderate disabilities. Curriculum-based data collection strategies. Influences of cultural and linguistic diversity, and implications for curricular and instructional adaptations.

SPED 553. Behavioral Strategies and Supports for Students with Disabilities (3)
Prerequisites: Special Education 500 and 501.
Positive behavioral supports for students with disabilities in general and special education settings. Current theories and programs in functional assessment and behavioral change. Applications in educational and community environments with diverse students.

SPED 560. Applications of Technology for Individuals with Disabilities (3)
Prerequisite: Special Education 500.
Educational applications of current technologies for learners with disabilities. Selection, modification, and classroom use of technologies to improve or bypass physical, sensory, communicative, learning, and social limitations.
SPED 596. Selected Topics in Special Education (1-4)
Specialized study of selected topics in special education. May be offered as either a workshop or lecture/discussion. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

SPED 600. Classroom Adaptations for Special Populations (3)
Prerequisite: Preliminary multiple or single subject credential.
Strategies for adapting curriculum, differentiating instruction, meeting social and behavioral needs. Modifying assessments for students with disabilities and students with gifts and talents in general education classrooms. Applicable to the California Clear Teaching Credential.

SPED 605. Advanced Behavioral and Health Supports (1)
Prerequisite: Admission to Level II credential or M.A. program in special education or related area.
Advanced approaches to dealing with behavioral crises and health issues in classroom, to include working with mental health specialists and school nurses.

SPED 634. Assessment: Students with Mild/Moderate Disabilities (2)
Prerequisites: Special Education 524 and 534.
Assessment for instructional decision making including alternative data collection strategies, models for analysis and synthesis of assessment information, influences of cultural and linguistic diversity, and implications for instruction.

SPED 635. Assessment: Early Childhood Special Education and Moderate/Severe Disabilities (3)
Prerequisite: Admission to credential program.
Models of assessment emphasizing observation and interviewing, performance-based approaches, transdisciplinary teaming, family-professional collaboration, and adaptations for specific disabilities, cultural, and linguistic diversity. Communicating and using assessment data for individualized program planning.

SPED 643. Educational Programs and Services for Young Children with Disabilities (3)
Prerequisites: Admission to credential program and concurrent registration in approved fieldwork.
Developing, implementing, and evaluating educational programs and services for young children with disabilities. Selecting and adapting curriculum and instructional approaches, collaborating with families from diverse cultural/linguistic backgrounds, and monitoring program effectiveness. Both Special Education 643A and 643B required. Maximum credit six units.
A. Preschoolers
B. Infants/Toddlers

SPED 644. Working with Gifted and Talented Students and Their Families (3)
Research-based instructional strategies to promote higher level and creative thinking; counseling approaches; services to families; issues in differentiating learning experiences.

SPED 645. Issues in Curriculum and Instruction for Students with Severe Handicaps (3)
Prerequisite: Special Education 525.
Design and implementation issues of instructional programs for students with severe handicaps; approaches which foster school and community integration and active family involvement will be analyzed.

SPED 647. Special Education Adaptations of Basic Skills Instruction (3)
Prerequisites: Admission to credential program and concurrent registration in Special Education 970.
Adaptations in curriculum and instruction in language development, reading, language arts, and mathematics for students with disabilities. Current research and practices related to linguistic, cultural, and ability differences.

SPED 648. Advanced Special Education Adaptations (3)
Prerequisites: Special Education 647 and concurrent registration in Special Education 980.
Advanced adaptations in curriculum and instruction in content areas, study skills, organizational strategies, and social and transition skills. English-as-a-second language approaches for students with disabilities. Research and practices related to linguistic, cultural, and ability differences.

SPED 650. Special Topics in Special Education (1-4)
Prerequisite: Admission to Level II credential or M.A. program in special education or related area.
Instructional sequences (mini-courses) focusing on a single topic or competency dealing with special education. Topics differ each semester to adjust to current literature in the field, training needs, and resource availability. Maximum combined credit of nine units for Special Education 650A, 650B, 650D applicable to a master’s degree.
A. Consultant Skills/Multidisciplinary Teams
B. Affective and Social Development
D. Instructional Programming

SPED 651. Legislation, Leadership, and Management for Special Education Services (3)
Prerequisite: Admission to Level II credential or M.A. program in special education or related area.
Implementation of laws, regulations, and compliance requirements in special education. Leadership approaches for managing school related services within a multidisciplinary context.

SPED 653. Advanced Instruction, Collaboration, and Consultation in Special Education (2)
Prerequisite: Admission to Level II credential or M.A. program in special education or related area.
Advanced instruction, collaboration, consultation skills, and strategies for working with students, teachers, paraprofessionals, school personnel, other service providers, parents, and representatives from the community.

SPED 654. Adapting Curriculum for Community Involvement and Skill Generalization (2)
Prerequisite: Admission to Level II credential or M.A. program.
Designing and adapting curriculum to promote generalization of skills of individuals with moderate/severe disabilities for involvement across settings with a focus on community activities and organizations.

SPED 655. Leadership and Management in Early Childhood Special Education (3)
Prerequisite: Admission to Level II credential or M.A. program.
Program development and leadership in early childhood education with emphasis on recommended practices, legal and legislative issues, staff and parent development, funding, policy, and program evaluation.

SPED 656. Developing Social Interaction and Play Skills (1)
Developing social and play skills for young children and students with moderate to severe disabilities with emphasis on evidence-based practices.

SPED 657. Facilitating Transition Across Environments in Special Education (3)
Facilitating transition for individuals with disabilities across activities, instructors, and settings including transition to employment. Instructional planning, assessment, and transition from school to work including postsecondary education.

SPED 662. Collaboration, Legislation, and Educational Planning in Special Education (3)
Prerequisites: Admission to credential program and credit or concurrent registration in Special Education 980.
Collaboration, legislation, and individualized special education program planning skills for working with school personnel, parents, and community resources. Listening and questioning techniques, interpersonal processes, family systems, conflict resolution, decision-making, team functions, goals, objectives, outcomes, legal and ethical issues.
SPED 676. Advanced Applied Behavior Analysis (3)
Prerequisite: Special Education 553.
Ethical application of research-based strategies based on behavior analysis. Emphasis on arranging learning opportunities to increase student skills and data collection.

SPED 681. Advanced Studies in Special Education (3)
Prerequisite: Special Education 524 or 525 or 528.
Educational theories, philosophies, research findings, issues and trends in area of exceptionality. Application of research to solution of educational problems. May be taken in each area of exceptionality.
A. Mild/Moderate Disabilities
B. Moderate/Severe Disabilities and Early Childhood

SPED 685. Single Case Research Design (3)
Prerequisite: Special Education 553.
Single-case research designs focused on interventions with individuals with disabilities.

SPED 696. Advanced Topics in Special Education (3)
Prerequisite: Twelve units in special education.
Intensive study in specific areas of special education. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

SPED 771. Directed Internship: Special Education (1-4) Cr/NC
Prerequisite: Permission of graduate adviser. Application to be made during previous semester.
Extensive daily participation or teaching in public schools and preparation for teaching of exceptional individuals. May be repeated with new content. Maximum credit six units applicable to a master’s degree.

SPED 798. Special Study (1-6) Cr/NC/RP
Prerequisites: Consent of staff; to be arranged with department chair and instructor.
Individual study. May involve fieldwork. Maximum credit six units applicable to a master’s degree.

CREDENTIAL COURSES

SPED 970. Practicum: Students with Disabilities in General and Special Education (2-4) Cr/NC
Fifteen hours of observation/participation per week. Prerequisites: Special Education 502 and consent of credential adviser.
Participation in general and special education programs for students with disabilities; supervised by a special educator. Integration and application of skills and knowledge gained in credential coursework. May be repeated in other specialties. Maximum credit four units applicable to each credential program. May be taken only once for credit.
A. Mild/Moderate Disabilities
B. Moderate/Severe Disabilities

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

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

SPED 985. Professional Development: Reflections on Practice (1) Cr/NC
Prerequisite: Completion or concurrent registration in Level II coursework.
Review of Level II: Professional Clear Induction Plans (PCIP); engage in reflective practice including goal setting; prepare portfolio with entries representing Level II courses and experiences.
Faculty

Nancy Farnan, Ph.D., Professor of Teacher Education, Director of School
Nadine S. Bezuk, Ph.D., Professor of Teacher Education
Ronald W. Evans, Ed.D., Professor of Teacher Education
Douglas Fisher, Ph.D., Professor of Teacher Education
Nancy E. Frey, Ph.D., Professor of Teacher Education
Margaret A. Gallego, Ph.D. Professor of Teacher Education
Ric A. Hovda, Ph.D., Professor of Teacher Education and Dean of the College of Education
Cheryl L. Mason, Ph.D., Professor of Teacher Education
Carla S. Mathison, Ph.D., Professor of Teacher Education
Barbara Moss, Ph.D., Professor of Teacher Education
Valerie O. Pang, Ph.D., Professor of Teacher Education
Cynthia Darche Park, Ph.D., Professor of Teacher Education
Randolph A. Philipp, Ph.D., Professor of Teacher Education
Pamela J. Ross, Ph.D., Professor of Teacher Education, Emerita
Victoria R. Jacobs, Ph.D., Associate Professor of Teacher Education
Sharan A. Gibson, Ph.D., Associate Professor of Teacher Education
Alexander W. Chizhik, Ph.D., Associate Professor of Teacher Education
Estella W. Chizhik, Ph.D., Associate Professor of Teacher Education
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Victoria R. Jacobs, Ph.D., Associate Professor of Teacher Education
Lisa J. Lamb, Ph.D., Associate Professor of Teacher Education
Jesus Nieto, Ph.D., Associate Professor of Teacher Education
Donna L. Ross, Ph.D., Associate Professor of Teacher Education
Rafaela M. Santa Cruz, Ph.D., Associate Professor of Teacher Education
Cathy Zozakiewicz, Ph.D., Associate Professor of Teacher Education
Meredith E. Houle, Ph.D., Assistant Professor of Teacher Education
Jessica Pierson, Ph.D., Assistant Professor of Teacher Education

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

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

UPPER DIVISION COURSES

TE 511. Assessment in Mathematics Education (3)
Techniques to assess and develop students' mathematical understanding. For use by elementary and secondary classroom teachers and mathematics education specialists.

TE 526. Teaching the Special Child in the Regular Classroom (3)
Prerequisite: Teaching credential or admission to multiple or single subject credential programs.
Prepares general education teachers to adapt curriculum and instruction, differentiate instruction, meet social and behavioral needs, modify instruction for students with disabilities and for students who are gifted and talented. Not for multiple or single subject credential candidates. Not open to students with credit in Special Education 450, Teaching the Special Child in the Regular Classroom.

TE 530. Children's/Adolescents' Literature (3)
Survey of children's/adolescents' literature and its incorporation into the classroom curriculum.

TE 596. Topics in Teacher Education (1-3 or 6) RP*
Designed to meet the needs of individuals or groups of teachers who wish to develop or continue the study of some problem. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES

TE 600. Curriculum Development in Education (3)
Prerequisite: Consent of instructor.
Prepares graduate students for 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.
Prerequisites: Attendance at induction seminar and completion of induction coursework. Not for multiple or single subject credential.

TE 602A. Seminar: California Clear Teaching Credential (1) Cr/NC
Prerequisite: Preliminary multiple or single subject credential.
Prerequisites: Preliminary multiple or single subject credential. Preparation, exploration of innovative instructional strategies 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 of three units applicable to a master's degree.

TE 602B. Seminar: Formative Assessment (3)
Prerequisites: Preliminary multiple or single subject credential and Teacher Education 602A.
Role of advanced study in induction coursework on professional development. Summative assessment, applying the Plan, Instruct, Assess, Reflect, and Apply (PIARA) assessment system. Future professional development needs and plans outlined. Applicable to the California Clear Teaching Credential.

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

TE 605. Innovations in Instruction (1-3)
Prerequisite: Teaching experience.
Exploration of innovative instructional practice in the public and private schools, with emphasis on innovative teaching strategies. An evaluation of the motivational effect and structural validity of promising instructional practices. See Class Schedule for specific content. Maximum credit of 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 of 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.
**Course Descriptions**

**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.
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 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: California Teaching Credential.
Trends in reading instruction, integration of 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)**
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.
Analytical and practical strategies for planning and integrating writing instruction within the curriculum of the primary (K-3) classroom.

**TE 644. Early Literacy and Early Intervention in Reading Recovery® (3)**
Prerequisites: Admission to reading recovery program and concurrent registration in Teacher Education 662 and 664.
Theoretical foundations underlying various aspects of reading and writing processes, early reading difficulties, oral language development and acquisition, early research and subsequent development of reading recovery.
TE 661. Theoretical Foundations of Literacy, Language, and Learning in Reading Recovery® (3)  
Prerequisites: Admission to reading recovery program and concurrent registration in Teacher Education 663 and 665.  
Theories about teaching and learning, reading and writing process, language development, comprehension, issues of literacy and culture, phonemic and phonological awareness, and Clay’s theory.

TE 662. Clinical Foundations of Reading Recovery® I (3)  
Prerequisites: Admission to reading recovery program and concurrent registration in Teacher Education 660 and 664.  
Develop expertise assessing and observing children, develop expertise in teaching children at risk of reading failure, and examine teacher leader role as teacher of reading recovery teachers.

TE 663. Clinical Foundations of Reading Recovery® II (3)  
Prerequisites: Admission to reading recovery program, Teacher Education 662, and concurrent registration in Teacher Education 661 and 665.  
Refinement of reading recovery teaching procedures based on theory and examination of teacher leader role as it pertains to teaching reading recovery teachers-in-training.

TE 664. Practicum in Leadership for Reading Recovery® Teacher Leaders I (3)  
Prerequisites: Admission to reading recovery program and concurrent registration in Teacher Education 660 and 662.  
Reading recovery as a system intervention to include multiple roles of teacher leader, teacher education, organization and implementation, guidelines and rationales of reading recovery, and educational change.

TE 665. Practicum in Leadership for Reading Recovery® Teacher Leaders II (3)  
Prerequisites: Admission to reading recovery program, Teacher Education 664, and concurrent registration in Teacher Education 661, 663.  
Reading recovery as a system intervention to include teacher education, organizational and implementation issues, guidelines and rationales of reading recovery, educational change, and role of teacher leader as researcher.

TE 677. Research-Based Pedagogy for Diverse Learners (3)  
Prerequisite: Admission to Master of Arts in Teaching program.  
Research-based pedagogy for diverse learners, Instructional strategies applicable across disciplines.

TE 693. Measuring and Assessing Student Achievement in Schools (3)  
Prerequisite: Admission to Master of Arts in Teaching program.  
Development of assessments and tests common in instructional and research contexts. Uses and interpretation of assessment data in given differential social/political contexts. Implications for research and instruction.

TE 696. Selected Topics in Teacher Education (1-3)  
Prerequisite: Valid teaching credential.  
Intensive study in specific areas of teacher education. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

TE 736. Field Experience as a Reading Specialist (3)  
Prerequisites: Teacher Education 637 and 18 units of core courses.  
Individually designed practicum for the reading specialist.

TE 779. Action Research in Learning Environments (3)  
Prerequisites: Teacher Education 693 and successful completion of 24 units of Master of Arts in Teaching coursework.  
Capstone course for Master of Arts in Teaching degree. Action research conducted in students’ own teaching environments.

TE 790. Seminar in Teacher Education (3-6)  
Prerequisite: Advancement to candidacy.  
Intensive consideration of selected topics of current importance in teacher education. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree. For collaborative induction programs with school districts: May be taken prior to advancement to candidacy for six units; up to 12 units applicable to a master’s degree.

TE 798. Special Study (1-6) Cr/NC/RP  
Prerequisite: Consent of staff; to be arranged with department chair and instructor.  
Individual study. May involve fieldwork. Maximum credit six units applicable to a master’s degree.

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.
- Teaching and Learning in the Content Area: Major (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.
- 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.

TE 923. Psychological Foundations of Education (1-3)  
Prerequisites: Psychology 101 and admission to multiple subject credential program.  
Implementing learning process through interactive skills, using instructional principles to facilitate learning and changes in behavior and techniques used in assessing instruction and pupil growth.
TE 930. Teaching Reading and Language Arts in the Elementary School (1-6)
Prerequisite: Admission to multiple subject credential program, education specialist credential program, or possession of a teaching credential.
Selecting, designing, and evaluating appropriate learning experiences to assure children's growth in reading and language arts. Includes nature of reading and language arts as a human behavior, various approaches, materials, and techniques used in teaching reading and language arts. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

TE 933. Teaching of Reading in the Secondary School (3)
Teacher competencies as they relate to the teaching of reading/writing and diagnosing needs in the content areas. For students completing a credential at SDSU, this course must be taken concurrently with enrollment in first or second semester single subject credential program.

TE 954. Humanistic and Social Aspects of Teaching (1-4)
Prerequisites: Admission to single subject credential program and concurrent registration in Teacher Education 922 and 963. Teacher competencies as they relate to values, awareness, self-concept, rights and responsibilities. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

TE 960. Basic Student Teaching Seminar (1-2) Cr/NC
Prerequisites: Admission to multiple subject credential program and concurrent registration in Teacher Education 965. Discussion of immediate problems in student teaching with emphasis on children's growth and development.

TE 961. Advanced Student Teaching Seminar (1-2) Cr/NC
Prerequisites: Satisfactory completion of Teacher Education 960, 965, and concurrent registration in Teacher Education 961. Teaching experiences including all the instructional activities for which a teacher in a classroom is normally responsible.

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.

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. On-site, full-day experience to implement teacher competencies as developed from the total professional sequence. Maximum credit twelve units.

TE 966. Advanced Student Teaching in Elementary Schools (1-12) Cr/NC/RP
Prerequisites: Admission to multiple subject credential program and concurrent registration in Teacher Education 960. On-site, full-day experience to implement teacher competencies as developed from the total professional sequence. Maximum credit twelve units.

TE 967. Elementary School Student Teaching (15) Cr/NC (Offered only at IVC)
Prerequisites: Admission to multiple subject credential program and concurrent registration in Teacher Education 960 and 961. On-site, full-day teaching experiences. Two consecutive eight week assignments at two different broad levels of schooling. Each eight week assignment will provide typical responsibilities of teachers through a graduated series of experiences, such as class preparation, instruction of students, maintaining accurate student records, attending faculty meetings and parent conferences.

TE 968. Secondary School Student Teaching (15) Cr/NC (Offered only at IVC)
Prerequisites: Admission to single subject credential program and concurrent registration in Teacher Education 903. On-site, full-day teaching experiences. Two consecutive eight week assignments in single subject content area; one in junior high school and one in senior high school. Each eight week assignment will provide typical responsibilities of teachers through a graduated series of experiences, such as class preparation, instruction of students, maintaining accurate student records, attending faculty meetings and parent conferences.

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Electrical and Computer Engineering

Refer to “Engineering” in this section of the bulletin.
Engineering

In the College of Engineering

OFFICE: Engineering 203
TELEPHONE: 619-594-6061
E-MAIL: info@engineering.sdsu.edu

Associateships

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

General Information

The College of Engineering offers graduate study leading to the Ph.D. degrees in engineering sciences (bioengineering; electrical and computer engineering; mechanical and aerospace engineering; structural engineering) and Master of Science degrees in bioengineering, aerospace, civil, electrical, and mechanical engineering. The Ph.D. degree programs are offered jointly with the University of California, San Diego. These curricula are designed to augment the student's undergraduate training by advanced study in one of the various fields of engineering. Recognizing the increasing importance in modern technology of the engineer-scientist team, San Diego State University has developed an academic program which offers to individuals holding a first degree in engineering, an opportunity to pursue advanced study in a specialized area of knowledge. The graduate degree may also prepare students for a teaching career.

Section I.

Master's Degree Programs

Master of Science Degree

Admission to Graduate Study

All students must satisfy the general requirements for admission to the Division of Graduate Affairs with classified graduate standing as described in Part Two of this bulletin. Candidates for admission to aerospace engineering, civil engineering, electrical engineering and mechanical engineering programs must have attained a grade point average of at least 2.85 (where A equals 4) in the last 60 semester (90 quarter) units of technical study attempted in the undergraduate degree program. In addition, applicants must have a bachelor's degree in a field of engineering appropriate to the field in which they desire to earn an advanced degree or in a field closely related thereto from an institution acceptable to the College of Engineering and the Division of Graduate Affairs. If undergraduate preparation is deemed insufficient, the student will be required to take specified courses for the removal of the deficiency. Such courses may be in addition to the minimum of 30 units for the master's degree in engineering. Students graduating from foreign universities need a cumulative grade point average of 3.0 or higher.

Students should contact their specific engineering department for GRE test requirements. Letters of recommendation for graduate study are helpful but optional.

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

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the College of Engineering (refer to the appropriate department section for the address to submit additional information).

Graduate Admissions

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

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

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

Note:

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

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

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

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

College of Engineering

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

(1) Personal statement of graduate program goals;

(2) Letters of recommendation (optional).

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin.

Specific Requirements for the Master of Science Degrees

In addition to meeting the requirements for classified graduate standing as stated above, the student must satisfy the basic requirements for the master's degree as described in Part Four of this bulletin. With the approval of the appropriate department, the student working toward the master of science degree may elect either Plan A, requiring a thesis and an oral defense, or Plan B, requiring a comprehensive written examination.

Students shall arrange their coursework, in conference with their graduate adviser, according to the following requirements for the specific degree.

Aerospace Engineering

(Major Code: 09021) (SIMS Code: 441001)

General Information: The Department of Aerospace Engineering and Engineering Mechanics offers graduate study leading to the Master of Science degree in aerospace engineering.

Students are encouraged to engage in thesis research or special study projects. Available areas of research include experimental, theoretical, and computational aerodynamics and fluid mechanics, structural mechanics, fracture mechanics, composite structures, random vibrations, fluid-structure interactions, acoustics, and aircraft and spacecraft stability and control.

The following materials should be mailed or delivered to:

Professor S. Venkataraman, Graduate Adviser
Department of Aerospace Engineering and Engineering Mechanics
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1308

(1) Personal statement of graduate program goals;

(2) Letters of recommendation (optional).
Specific requirements for the degree: The student’s program prepared in conference with and approved by the graduate adviser, must satisfy the following requirements:

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 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:

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<tr>
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<th>Title</th>
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<tr>
<td>BIOL 590</td>
<td>Physiology of Human Systems (4)</td>
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<tr>
<td>M E 580</td>
<td>Biomechanics (3)</td>
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<tr>
<td>M E 610</td>
<td>Finite Element Methods in Mechanical</td>
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<td>Engineering (3)</td>
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<tr>
<td>M E 681</td>
<td>Biomaterials (3)</td>
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<tr>
<td>M E 685/</td>
<td>Micro-Electro-Mechanical Systems (MEMS)</td>
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<td>Design and Applications (3)</td>
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<tr>
<td>EE 685</td>
<td>and Applications (3)</td>
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<tr>
<td>M E 580</td>
<td>Biomechanics (3)</td>
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Biomaterials

(Major Code: 09051) (SIMS Code: 446003)

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<tr>
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<td>BIOL 585</td>
<td>Cell and Molecular Immunology (3)</td>
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<tr>
<td>M E 540</td>
<td>Nonmetallic Materials (3)</td>
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<td>M E 681</td>
<td>Biomaterials (3)</td>
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<td>M E 580</td>
<td>Biomechanics (3)</td>
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Bioinstrumentation

(Major Code: 09051) (SIMS Code: 446004)

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<td>BIOL 590</td>
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<td>E E 503</td>
<td>Biomedical Instrumentation (3)</td>
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<td>Micro-Electro-Mechanical Systems (MEMS)</td>
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<td>Design and Applications (3)</td>
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<td>Biomechanics (3)</td>
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Electives:

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<td>A E 601</td>
<td>Computational Fluid Dynamics (3)</td>
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<tr>
<td>BIOL 585</td>
<td>Cellular and Molecular Immunology (3)</td>
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<td>BIOL 590</td>
<td>Physiology of Human Systems (4)</td>
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<td>BIOL 597A</td>
<td>Univariate Statistical Methods in Biology</td>
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<td>CHEM 711</td>
<td>Chemical Thermodynamics (3)</td>
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<td>CHEM 751</td>
<td>Separations Science (3)</td>
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<td>Motor Control and Rehabilitation Science (3)</td>
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<td>ENV E 554</td>
<td>Process Fundamentals of Environmental Engineering (3)</td>
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<td>ENV E 648</td>
<td>Biological Processes and Bioremediation Engineering (3)</td>
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<td>M E 502</td>
<td>Continuum Mechanics (3)</td>
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<td>Engineering (3)</td>
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<td>M E 645</td>
<td>Mechanical Behavior of Engineering Materials (3)</td>
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<td>M E 656</td>
<td>Conduction Heat and Transfer (3)</td>
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<td>Design of Medical Devices (3)</td>
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<tr>
<td>PHYS 670B</td>
<td>Medical Physics II (3)</td>
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</table>
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 associations. Experience as a graduate teaching associate can help prepare students for part-time or full-time teaching careers.

Applicants with a bachelor’s degree in an approved non-engineering curriculum must make up the deficiencies in biology, calculus, chemistry, computer skills, differential equations, fluid mechanics and hydraulics, physics, statics and dynamics, statistics, and thermodynamics, as determined by the graduate adviser.

The following materials should be mailed or delivered to:
Dr. Julio R. Valdes, Graduate Adviser
Department of Civil, Construction, and Environmental Engineering
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1324

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

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

1. Eighteen units of 600- and 700-numbered courses in civil engineering and/or construction engineering. A total of no more than three units from courses numbered 797, 798, and 799 may be used to satisfy this requirement.
2. A minimum of four courses should be selected from one of the specialty areas listed below; in exceptional cases, this requirement may be waived at the discretion of the graduate adviser, provided the substitute course is in the College of Engineering and enhances a coherent program in a specific professional area.

3. At least twelve additional units of 500-, 600-, or 700-numbered courses, approved by the graduate adviser.

Areas of Specialization in Civil Engineering

1. Construction Engineering
(Major Code: 09081) (SIMS Code: 442030)
CON E 650 Construction Labor Productivity (3)
CON E 651 Project Production System Design in Construction (3)
CON E 652 Construction Operations Modeling and Technology (3)
CON E 653 Construction Scheduling (3)
CON E 654 Construction Claims (3)
CON E 655 Project Design and Portfolio Management (3)

2. Geotechnical Engineering
(Major Code: 09081) (SIMS Code: 442025)
CIV E 640 Advanced Soil Mechanics (3)
CIV E 641 Advanced Foundation Engineering (3)
CIV E 642 Groundwater Seepage and Earth Dams (3)
CIV E 644 Soil Dynamics (3)

3. Structural Engineering
(Major Code: 09081) (SIMS Code: 442075)
CIV E 605 Prestressed Concrete Structures (3)
CIV E 607 Dynamics of Structures (3)
CIV E 608 Earthquake Engineering (3)
CIV E 610 Finite Element Analysis of Structures (3)
CIV E 612 Advanced Concrete Materials (3)

4. Transportation Engineering
(Major Code: 09081) (SIMS Code: 442085)
CIV E 620 Traffic Flow and Control (3)
CIV E 621 Transportation Demand Analysis (3)
CIV E 622 Mass Transit Engineering (3)
CIV E 781 Seminar in Transportation Engineering (2 or 3)

5. Water Resources Engineering
(Major Code: 09081) (SIMS Code: 442096)
CIV E 631 Spatial Hydrology (3)
CIV E 632 Computational Hydraulics and Hydrology (3)
CIV E 633 Environmental Hydrology (3)
CIV E 634 Surface Water Hydrology (3)
CIV E 635 Small Catchment Erosion (3)
CIV E 638 Sedimentation and River Engineering (3)

Concentration in Environmental Engineering

(Major Code: 09221) (SIMS Code: 442005)

Specific requirements for the concentration: The student’s program, prepared in conference with and approved by the graduate and environmental engineering adviser, must satisfy the following requirements:

1. A minimum of 30 units of coursework, no more than three units can be taken in Environmental Engineering 797 and no more than three units can be taken in Environmental Engineering 798.
2. Eighteen units of 600-700-numbered courses in civil and environmental engineering.

Required courses (15 units):
ENV E 554 Process Fundamentals of Environmental Systems (3)
ENV E 645 Aquatic Chemistry for Environmental Engineers (3)
ENV E 646 Microbiological Principles of Environmental Engineering (3)
ENV E 647 Physical and Chemical Processes of Water Pollution Control (3)
ENV E 648 Biological Processes and Bioremediation Engineering (3)

Prescribed Electives (six units):
ENV E 556 Air Pollution Engineering (3)
ENV E 558 Solid and Hazardous Waste Engineering (3)
Electives: Nine units selected in consultation with the graduate adviser:

- A statistics course equivalent to Civil Engineering 160 and an introductory course in environmental engineering equivalent to Environmental Engineering 355 must be taken before or during the early stages of the program.

**Electrical Engineering**

(Major Code: 09091) (SIMS Code: 443001)

**General Information:** The Department of Electrical and Computer Engineering offers graduate study leading to a Master of Science degree in Electrical Engineering. The program provides balanced opportunities to study practical engineering design and do research. Research assistantships are available in the research areas of computer engineering, digital system design, VLSI design, digital signal and image processing and communications systems, electrophysiology and instrumentation, power systems, biomedical and rehabilitation engineering, computer networking, and bioinformatics.

For further information visit the Web site: http://electrical.sdsu.edu

**Specific Requirements for the Degree:** Completion of 30 units of 500, 600, or 700-level courses to include one of two options: Plan A (Thesis) or Plan B (Comprehensive Examination). Students cannot use more than 12 units from any discipline areas. Students with the approval of the graduate adviser are required to plan the program so they can satisfy the core and breadth course requirements.

1. Core Courses: Three units selected from Electrical Engineering 601 or 602.
2. Breadth Requirement: Students are required to complete with the approval of the graduate adviser a specific set of approved courses from the following discipline areas: Communication Systems, VLSI and Digital Systems, Electromagnetic Systems, Computer Networks, Digital Signal Processing, Power and Control, Software Engineering, Rehabilitation Electronics. The number of courses in each of the breadth discipline areas depends on Plan A (Thesis) or Plan B (Comprehensive Examination). Plan A students are required to take at least one course each from two of the discipline areas. Plan B students are required to take at least two courses each from two of the discipline areas.
3. Requirements for Plan A (Thesis): Three units from Electrical Engineering 601 or 602, six units of breadth courses, six units of Electrical Engineering 797, three units of Electrical Engineering 799A (Thesis), and 12 units of 500-, 600-, or 700-level courses approved by the graduate adviser. Credit for Electrical Engineering 797 will be given only after completing the thesis. Credit cannot be given for Electrical Engineering 798 for students in Plan A.
4. Requirements for Plan B (Comprehensive Examination): Three units from Electrical Engineering 601 or 602, 12 units of breadth courses, and 15 units of 500-, 600-, or 700-level courses approved by the graduate adviser in the selected area of specialization. Electrical Engineering 797 cannot be used as one of the required courses. Students taking Plan B must pass a comprehensive examination. The examination tests the students’ understanding and mastery of fundamental principles and their ability to apply them to engineering problems. Members of the ECE faculty will grade the comprehensive examination for technical correctness, completeness, and clarity of expression. After two unsuccessful attempts, the student may not take the examination without written permission from the graduate adviser. The adviser may require the student to successfully complete certain additional courses before taking the comprehensive examination for a third and final time. Plan B students intending to take the comprehensive examination should register in Electrical Engineering 799C during the semester. For more information, visit http://electrical.sdsu.edu.

**Discipline Areas:** Courses are available in the following discipline areas:

- Communication Systems
- VLSI and Digital Systems
- Electromagnetic Systems
- Computer Networks
- Digital Signal Processing
- Power and Control
- Software Engineering
- Rehabilitation Electronics

Students can choose to specialize in one of these areas. For the availability of the specializations, courses, research areas, and other information related to the graduate program, refer to the Web site at http://electrical.sdsu.edu.

**Mechanical Engineering**

(Major Code: 09101) (SIMS Code: 447001)

**General Information:** The Department of Mechanical Engineering offers graduate study leading to the Master of Science degree in mechanical engineering. Available opportunities for thesis research and special study projects include heat transfer, thermodynamics, fluid mechanics, mechanics of materials, vibration, controls, CAD/CAM and robotics, materials optimization and bioengineering.

The following materials should be mailed or delivered to: Dr. Asfaw Beyene, Graduate Adviser Department of Mechanical Engineering San Diego State University 5500 Campanile Drive San Diego, CA 92182-1323

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

**Specific Requirements for the Degree:** The student’s program, prepared in conference with and approved by the graduate adviser, must satisfy the following requirements:

1. Twenty-one units of coursework:
   a. Twelve units in one area of specializations (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 ME 797, 798, 799A, 799B, 799C) selected in consultation with the graduate adviser.
   c. At least 15 units of coursework (excluding ME 797, 798, 799A, 799B, 799C) from mechanical engineering.
2. Nine additional units:
   a. Thesis students: Six units of ME 797 and three units of 799A or 799B (thesis).
   b. Non-thesis students: Three units of ME 797 and six units of 500-, 600-, or 700-level courses from mechanical engineering.
3. The total number of units from 500-level courses should not exceed nine.

**Group A: Design and Manufacturing**

- M E 502 Continuum Mechanics (3)
- M E 514 Advanced Machine Design (3)
- M E 543 Powder-Based Manufacturing (3)
- M E 555 Thermal Systems Analysis and Design (3)
### General Information

The Master of Engineering degree is a practice-oriented, interdisciplinary degree designed to meet the needs of students who are interested in furthering a career in engineering with a business/management emphasis. The student will select his/her own program in consultation with the program adviser of the respective department subject to the guidelines listed below. In addition to the course requirements, the student is required to complete a design project and a final written report. This phase of the program introduces the student to the problems and solutions faced by practicing engineers. The program is designed for both the industrial professional who is seeking a career enhancement and also to the new baccalaureate graduate who wants to continue to study in order to be able to enter the work force with well-defined and honed professional skills.

The program is administered by the associate dean of Graduate Studies and Research in the College of Engineering. The faculty responsible for directing this program are:

- Dr. R. Lal Tummala, Professor and Chair, Department of Electrical and Computer Engineering
- Dr. Morteza M. Mehrabadi, Professor and Chair, Department of Mechanical Engineering
- Dr. Kenneth D. Walsh, Professor, Department of Civil, Construction, and Environmental Engineering

In addition to sending materials to Graduate Admissions, the following should also be mailed or delivered to:

- Gradute 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).

### Course Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>M E 580</td>
<td>Biomechanics</td>
<td>(3)</td>
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<tr>
<td>M E 585</td>
<td>Fundamentals of Micro-Electro-Mechanical Systems (MEMS)</td>
<td>(3)</td>
</tr>
<tr>
<td>M E 596</td>
<td>Advanced Mechanical Engineering Topics (related to Design and Manufacturing)</td>
<td>(3)</td>
</tr>
<tr>
<td>M E 510</td>
<td>Finite Element Methods in Mechanical Engineering</td>
<td>(3)</td>
</tr>
<tr>
<td>M E 621</td>
<td>Mechanical Vibrations</td>
<td>(3)</td>
</tr>
<tr>
<td>M E 645</td>
<td>Mechanical Behavior of Engineering Materials</td>
<td>(3)</td>
</tr>
<tr>
<td>M E 646</td>
<td>Mechanics of Sintering</td>
<td>(3)</td>
</tr>
<tr>
<td>M E 683</td>
<td>Design of Medical Devices</td>
<td>(3)</td>
</tr>
<tr>
<td>M E 685/EE 685</td>
<td>Micro-Electro-Mechanical Systems (MEMS)</td>
<td>(3)</td>
</tr>
<tr>
<td>M E 696</td>
<td>Advanced Topics in Mechanical Engineering (related to Design and Manufacturing)</td>
<td>(3)</td>
</tr>
<tr>
<td>E M 621</td>
<td>Theory of Elasticity</td>
<td>(3)</td>
</tr>
<tr>
<td>E M 641</td>
<td>Structural Optimization</td>
<td>(3)</td>
</tr>
</tbody>
</table>

### Groups

#### Group B: Dynamics and Control

- M E 520 Introduction to Mechanical Vibrations (3)
- M E 530 Automatic Control Systems (3)
- M E 596 Advanced Mechanical Engineering Topics (related to Dynamics and Control) (3)
- M E 621 Mechanical Vibrations (3)
- M E 622 Advanced Topics in Automatic Controls (3)
- M E 696 Advanced Topics in Mechanical Engineering (related to Dynamics and Control) (3)

#### Group C: Energy and Thermofluids

- M E 555 Energy and Thermal Systems Analysis and Design (3)
- M E 556 Solar Energy Conversion (3)
- M E 596 Advanced Mechanical Engineering Topics (related to Energy and Thermofluids) (3)
- M E 651 Advanced Thermodynamics (3)
- M E 653 Combustion (3)
- M E 655 Conduction Heat and Transfer (3)
- M E 657 Convection Heat Transfer (3)
- M E 658 Radiation Heat Transfer (3)
- M E 661 Gas Dynamics (3)
- M E 696 Advanced Topics in Mechanical Engineering (related to Energy and Thermofluids) (3)
- A E 601 Computational Fluid Mechanics (3)
- A E 612 Compressible Fluid Flow (3)
- A E 644 Turbulent Flow (3)

#### Group D: Materials and Mechanics

- M E 502 Continuum Mechanics (3)
- M E 520 Introduction to Mechanical Vibrations (3)
- M E 540 Nonmetallic Materials (3)
- M E 543 Powder-Based Manufacturing (3)
- M E 580 Biomechanics (3)
- M E 596 Advanced Mechanical Engineering Topics (related to Materials and Mechanics) (3)
- M E 610 Finite Element Methods in Mechanical Engineering (3)
- M E 621 Mechanical Vibrations (3)
- M E 645 Mechanical Behavior of Engineering Materials (3)
- M E 646 Mechanics of Sintering (3)
- M E 681 Biomaterials (3)
- M E 696 Advanced Topics in Mechanical Engineering (related to Materials and Mechanics) (3)
- E M 621 Theory of Elasticity (3)
- E M 641 Structural Optimization (3)

### Mechanical Engineering

#### BS/MS 4 + 1 Degree Program

(Major Code: 09010)

The BS/MS 4 + 1 degree program is for SDSU mechanical engineering students who wish to gain expertise in a specialization of mechanical engineering prior to employment in industry, government, or as preparation for further training. Students must complete 160 units to be simultaneously awarded the B.S. degree in mechanical engineering and the M.S. degree in mechanical engineering. Students can apply for admission to the BS/MS 4 + 1 degree program when they have successfully completed a minimum of 90 units or a maximum of 115 units. These units must count towards one or the other of the two SDSU degree programs (BS or MS) that will ultimately be awarded in the dual degree program. All students must have a satisfactory score (minimum of 950 for combined verbal and quantitative) on the Graduate Record Examination (GRE) General Test and a minimum overall GPA of 3.0.

To satisfy the requirements for the BS/MS 4 + 1 degree program, students must achieve at least a 3.0 average in the 30 units of courses used to satisfy the graduate program of study. Of the 30 units, a maximum of nine units may be in 500-level mechanical engineering electives and all other program requirements must be satisfied. The BS/MS 4 + 1 degree program allows students to use any three 500-level mechanical engineering courses toward their graduate degree. Students in the BS/MS 4 + 1 degree program must follow the thesis option. Upon successful completion of the BS/MS 4 + 1 degree program, students will receive the B.S. degree in mechanical engineering and M.S. degree in mechanical engineering.

#### Master of Engineering Degree

(Major Code: 09134) (SIMS Code: 444050)

### General Information

The Master of Engineering degree is a practice-oriented, interdisciplinary degree designed to meet the needs of students who are interested in furthering a career in engineering with a business/management emphasis. The student will select his/her own program in consultation with the program adviser of the respective department subject to the guidelines listed below. In addition to the course requirements, the student is required to complete a design project and a final written report. This phase of the program introduces the student to the problems and solutions faced by practicing engineers. The program is designed for both the industrial professional who is seeking a career enhancement and also to the new baccalaureate graduate who wants to continue to study in order to be able to enter the work force with well-defined and honed professional skills.

The program is administered by the associate dean of Graduate Studies and Research in the College of Engineering. The faculty responsible for directing this program are:

- Dr. R. Lal Tummala, Professor and Chair, Department of Electrical and Computer Engineering
- Dr. Morteza M. Mehrabadi, Professor and Chair, Department of Mechanical Engineering
- Dr. Kenneth D. Walsh, Professor, Department of Civil, Construction, and Environmental Engineering

In addition to sending materials to Graduate Admissions, the following should also be mailed or delivered to:

- Graduate Adviser
- Master of Engineering Program
- College of Engineering
- San Diego State University
- 5500 Campanile Drive
- San Diego, CA 92182-1326

(1) Personal statement of graduate program goals;
(2) Letters of recommendation (optional).
Admission to Graduate Study

All students must satisfy the general requirements for admission to the Division of Graduate Affairs with classified graduate standing as described in Part Two of this bulletin. Candidates must have attained an undergraduate grade point average of at least 2.85 (4 point scale) in the last 60 semester (90 quarter hours) of technical study. In addition, applicants must have a bachelor’s degree in engineering or a closely related discipline. If undergraduate preparation is deemed insufficient, the student will be required to take specified undergraduate courses to remove this deficiency. Such courses may be in addition to the 36 units required. Admission to the program will be limited to applicants whose background, interest, and expertise are consistent with the demands of the design projects.

Specific Requirements for Master of Engineering Degree

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master’s degree as described in Part Four of this bulletin. The student must also complete a graduate program of 36 units to include 18 units of graduate engineering courses, 12 units of graduate business courses, and six units of project registered under Engineering 798. The courses in engineering and business administration are selected in consultation with the graduate adviser. With the consent of the adviser, one unit of 798, with appropriate content, may be substituted for one unit in business administration. No more than a total of seven units of 798 will be accepted for credit towards the degree.

The industry-oriented design project is to be selected in cooperation with the graduate adviser in the area of interest. Typically, the students take this project at the end of the program of study as a culminating experience integrating engineering and business knowledge attained through coursework and experience. A formal written report of project findings will be submitted and approved by a committee of two engineering faculty members and one faculty member from business administration.

Section II.

Doctoral Programs

http://www.engineering.sdsu.edu/main/dph.htm

Engineering Sciences

(Bioengineering)
(Major Code: 09051) (SIMS Code: 446006)

(Electrical and Computer Engineering)
(Major Code: 09095) (SIMS Code: 443050)

(Mechanical and Aerospace Engineering)
(Major Code: 19020) (SIMS Code: 444021)

(Structural Engineering)
(Major Code: 09084) (SIMS Code: 442501)

The cooperating faculties of the College of Engineering at San Diego State University and the Jacobs School of Engineering at the University of California, San Diego offers joint doctoral programs in bioengineering, electrical and computer engineering, mechanical and aerospace engineering, and structural engineering. The Doctor of Philosophy degree is awarded jointly by the Trustees of the California State University and the Regents of the University of California in the names of both cooperating institutions.

The Ph.D. degree is a research degree and represents both attainment of advanced knowledge and demonstration of research skills. It is not awarded solely for the fulfillment of technical requirements such as academic residence and coursework. A typical student with an appropriate bachelor of science degree in engineering may complete the joint program in five to six years of full-time study and research. A student with advanced standing may complete the program in a shorter period of time.

The joint Doctor of Philosophy degree allows research specialties in the following: bioengineering (molecular biomechanics and cell/tissue engineering with a focus in cell-matrix engineering); electrical and computer engineering (communication theory and systems; computer engineering; electronic circuits and systems; intelligence systems, robotics and control; photonics; and signal and image processing); mechanical and aerospace engineering (applied mechanics, materials science, materials processing, computational fluid mechanics, combustion, experimental fluid mechanics); structural engineering (finite element methods in structural analysis, soil mechanics).

Program Administration

San Diego State University:
Program Director: Eugene A. Olevsky
University of California, San Diego:
Program Director: Enrique Luco

Financial Support

Students admitted to the program will be eligible for teaching 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
College of Engineering

The following materials should be mailed or delivered to:

Director of the Engineering Joint Doctoral Program
College of Engineering
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1326

(1) Three letters of recommendation.

Residency Requirements

The student must spend at least one academic year in full-time residence at each of the two institutions. The definition of such residence must be in accord with the regulations of the Divisions of Graduate Affairs of SDSU and UCSD.

Advising Committee

When a student is admitted to the joint doctoral program, the director of the joint doctoral programs in engineering at UCSD and the director of the joint doctoral programs in engineering at SDSU will appoint a three-member advising committee consisting of at least one member from each institution. It is the responsibility of this committee to develop in consultation with the student a course of study and a plan of preparation for the doctoral qualifying examination, which should be taken as soon as possible after the two years of study at the two institutions. Students with advanced standing may be capable of taking the examination earlier. Upon the student’s successful completion of the examination, the advising committee will recommend to the director of the joint doctoral program at UCSD and the director of the joint doctoral program at SDSU, the membership of the student’s doctoral committee. Upon appointment, this committee will supersede the advising committee and be responsible for the student’s program of study and dissertation research.

Course Requirements

The Doctor of Philosophy degrees in engineering sciences (bioengineering; electrical and computer engineering; mechanical and aerospace engineering; structural engineering) are research degrees and represent both attainment of advanced knowledge and demonstration of research skills. Therefore, no specific course requirements for the joint doctoral programs exist; however, the doctoral qualifying examination is based on a certain level of competence in the general areas of each degree. Preparation for the examination is normally done through coursework in these areas.

Qualifying Examinations

Joint Qualifying Committee

The doctoral program qualifying examination is administered by the student’s advising committee supplemented, if appropriate, by faculty appointed by the director of the joint doctoral programs in engineering at UCSD and the director of the joint doctoral programs in engineering at SDSU. The examination will be oral and will be at the level and content of the SDSU and UCSD graduate courses. The specific areas will be approved in advance by the director of the joint doctoral programs in engineering at UCSD and the director of the joint doctoral programs in engineering at SDSU. One of the areas may be satisfied by completing a series of courses in the area with at least a B grade in each course.

Joint Doctoral Committee

Upon successful completion of the doctoral qualifying examination, a doctoral committee shall be appointed by the graduate deans of SDSU and UCSD upon the recommendation of the director of the joint doctoral programs in engineering at UCSD and the director of the joint doctoral program in engineering at SDSU. The doctoral committee shall supervise the continued study and research programs of the student. The chair of the committee is the primary adviser of the student’s dissertation research. The dissertation committee will consist of three members from each institution; one of the three will be from outside of the respective UCSD department and one from outside the student’s major area.

Senate Qualifying Examination

The major requirement for the doctorate is the completion of a dissertation based on original research, which contributes new knowledge to the fields. The Senate Qualifying Examination consists of a presentation of initial dissertation results and plans for future research. The chair of the doctoral committee will determine in consultation with the student when the Senate Qualifying Examination will be held. Approval of a student’s dissertation topic by the doctoral committee implies that the committee believes that the work will contain the potential for one or more articles publishable in refereed journals.

Dissertation

The doctoral committee will administer the final examination, which will consist of the student’s presentation and defense of the dissertation, with particular emphasis on the principal findings and areas of future research. The first part of this examination is open to the public; a concluding portion involves appropriate questioning of the student by the committee.

The detailed requirements concerning the preparation of the dissertation, the number of copies, the editorial style, etc., are set forth in the UCSD document entitled “Instructions for the Preparation and Submission of Doctoral Dissertations and Masters’ Theses.” Acceptance of the dissertation by the University Librarian at UCSD and the Division of Graduate Affairs at SDSU represents the final step in completion of the student’s degree requirements.

Satisfactory Progress

The students admitted to this program are expected to make continuous, satisfactory progress and to remain in good standing at both institutions.

Award of the Degree

The Doctor of Philosophy degrees in engineering sciences/applied mechanics, bioengineering, electrical and computer engineering, and structural engineering will be awarded jointly by the Trustees of the California State University and the Regents of the University of California in the names of both cooperating institutions.

Faculty

The following faculty members of the cooperating institutions participate in the joint doctoral programs in engineering and are available for direction of research and as members of joint doctoral committees.

San Diego State University:
Program Director: Eugene A. Olevsky

Committee Members, Bioengineering: S. Kassegne, K. May-Newman.
Committee Members, Electrical and Computer Engineering: M. Gupta, F. Harris, S. Kumar, S. Nagaraj, M. Sarkar, S. Sharma.
Rehabilitation Technology Certificate

The purpose of this certificate is to train interested engineers and non-engineers in the field of rehabilitation technology using formal classroom instruction, project design and fabrication, and internship. Enrollment in this certificate program will provide interested engineering students exposure to rehabilitation technology. For non-engineering rehabilitation professionals (e.g., vocational rehabilitation counselors, special education teachers, transition and supported employment specialists), the certificate program will provide specialty training in the application of rehabilitation technology. Specifically, the certificate program will do the following:

1. Expose graduate engineering students to the problems and promises of rehabilitation engineering as a field of specialization.
2. Provide a number of interrelated training activities that will improve the professional competence of employed rehabilitation workers.
3. Provide opportunities for extensive training, in the form of extended internships with knowledgeable rehabilitation professionals whose backgrounds are in such specializations as biomechanics, physical and occupational therapy, prosthetics and orthotics, rehabilitation counseling, rehabilitation electronics, rehabilitation engineering, special education, speech, language, and hearing sciences, etc.

4. Offer both formal classroom instruction and guided problem solving opportunities in designing, building, customizing, and delivering rehabilitation technology for enhancing the integration of individuals with disabilities into school, residential, community, and employment settings.

This is an advanced trans-disciplinary academic certificate at the postbaccalaureate level. Admission requirements include a bachelor’s degree in engineering, rehabilitation, or special education, or a related allied health field. Students admitted into the program must maintain a minimum grade point average of 3.0 in all certificate coursework with no less than a grade of C in all courses. Depending on the background and work experience, students may be required to remove deficiencies through additional coursework as part of the certificate requirements.

Students in the certificate program will complete 12 units of formal coursework and one semester of internships as described below unless alternative courses are approved by the program advisers.

Electrical Engineering 502 (Electronic Devices for Rehabilitation - 3 units) will acquaint students with the design and application of electronic devices used in rehabilitation; explain the problems of the disabled; and present possible solutions for some of their needs. This is a non-traditional and practical electrical engineering course that requires student involvement in the collaborative assessment (with students in Speech, Language, and Hearing Sciences 676) of disabled persons for their cognitive, communicative, and physical abilities at the SDSU Communications Clinic.
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.
In the College of Engineering

OFFICE: Engineering 308
TELEPHONE: 619-594-6074
E-MAIL: ae@engineering.sdsu.edu

Faculty
Allen Plotkin, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics
Joseph Katz, D.Sc., Professor of Aerospace Engineering and Engineering Mechanics
Balbir S. Narang, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics
Nagy Nosseir, Ph.D., Professor of Aerospace Engineering and Engineering Mechanics
Gustaaf Jacobs, Ph.D., Associate Professor of Aerospace Engineering and Engineering Mechanics
Satchi Venkataraman, Ph.D., Associate Professor of Aerospace Engineering and Engineering Mechanics
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)

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 Structure (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; laminate 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 627. Theory of Elastic Stability (3)
Prerequisite: Engineering Mechanics 621.

E M 731. Aeroelasticity (3)
Prerequisites: Engineering Mechanics 611 and Aerospace Engineering 620.
Fluid-structure interaction and its static and dynamic effects on airplanes. Unsteady aerodynamics, static aeroelastic instability (divergence), aileron reversal, sweep effects, doublet lattice method, dynamic aeroelastic instability (flutter), computational dynamic aeroelasticity using NASTRAN.

E M 797. Research (1-3) Cr/NC/RP
Prerequisite: Consent of graduate adviser.
Research in engineering. Maximum credit six units applicable to a master’s degree.
In the College of Engineering

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Faculty
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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
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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 businessman 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

The Leonhard Chair is intended to promote excellence in environmental engineering.

CIV E (ENV E)

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

NOTE: Proof of completion of prerequisites (copy of transcript) is required for all courses which list prerequisites.

Civil Engineering (CIV E)

UPPER DIVISION COURSES

CIV E 521. Structural Analysis II (3)
Prerequisite: Civil Engineering 321.

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)
Two lectures and three hours of laboratory.
Prerequisite: Civil Engineering 444.

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)

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 496, 499 and 596 applicable to a bachelor’s degree.
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 521 with minimum grade of C.
General procedure, various types of finite elements; analysis and design of isotropic and orthotropic plates and shells, deep beams, and shear walls using finite element technique; use of digital computers for solutions. Application to civil engineering structures.

CIV E 612. Advanced Concrete Materials (3)
Two lectures and three hours of laboratory.
Prerequisite: Civil Engineering 421.

CIV E 620. Traffic Flow and Control (3)
Prerequisite: Civil Engineering 481 or City Planning 625 or Geography 559, with minimum grade of C.
Advanced treatment of traffic flow and control issues. Highway capacity and traffic flow characteristics; traffic flow modeling, intersection control, freeway control systems, intelligent transportation systems.

CIV E 621. Transportation Demand Analysis (3)
Prerequisite: Civil Engineering 481 or Geography 559 or City Planning 625, with minimum grade of C.
Travel demand modeling with emphasis on application to growing metropolitan areas; four-step travel demand forecasting; disaggregate, behavioral, and activity-based approaches; recent methodological developments; transportation-land use interactions.

CIV E 622. Mass Transit Engineering (3)
Prerequisite: Civil Engineering 481 or City Planning 625 or Geography 559, with minimum grade of C.
Transit system characteristics, analysis of demand for transit services, transit system planning, scheduling, analysis and design.

CIV E 631. Spatial Hydrology (3)
Prerequisite: Civil Engineering 444.
Integration of spatial data analysis and hydrologic modeling. Quantification of spatially distributed hydrologic characteristics. Decomposition of drainage network systems to support quasi-distributed hydrologic modeling. Quantification of hydrologic impacts due to model resolution, altered land use conditions, and modeling techniques.
CIV E 632. Computational Hydraulics and Hydrology (3)  
Prerequisites: Civil Engineering 445 and 530.  
Computational methods applied to hydraulics and hydrology.  
Explicit and implicit schemes for solving hyperbolic problems.  
Method of characteristics. One- and two-dimensional nonsteady open channel flow simulation.

CIV E 633. Environmental Hydrology (3)  
Prerequisites: Civil Engineering 445 and Environmental Engineering 355.  
Hydrosphere function, hydroclimatology, hydrographic characteristics, desertification, hydroecology, salinity modeling and management, stream and lake restoration, and case studies.

CIV E 634. Surface Water Hydrology (3)  
Prerequisite: Civil Engineering 445.  

CIV E 635. Small Catchment Erosion (3)  
Prerequisite: Civil Engineering 444.  

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

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 an understanding of contractual basis for construction claims through final resolution of claims. Clauses that form the basis for claims; recognition of claims, communicating claims elements, pricing claims, and methods for resolving claims.

CON E 655. Project Design and Portfolio Management (3)  
Prerequisites: Construction Engineering 651 or Civil Engineering 495, and Environmental Engineering 320 or 355.  
Techniques for project selection, definition, design management and value generation, including consideration of ROI, feasibility, and portfolio diversification. Incorporation of life-cycle considerations into all levels of design, including concepts of sustainability. Owner, designer, and contractor perspectives.
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.
Electrical and Computer Engineering

In the College of Engineering

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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
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Arif Ege Engin, Ph.D., Assistant Professor of Electrical and Computer Engineering

Adjunct Faculty
Khurram Waheed, Ph.D., Electrical and Computer Engineering

The Radio Frequency Communications Systems Industry Chair
The Radio Frequency (RF) Communications Systems Industry Chair was established in recognition of the pervasiveness and vital role of radio frequency and wireless communications in modern society, and the emergence of San Diego as the world’s leading center of research and development in the field of telecommunications and wireless engineering. The chair is sustained through generous contributions of Cubic Corporation and other corporations engaged in wireless communication technology, in appreciation of contributions of students trained in the field at SDSU. The RF Communications Systems Industry Chair is intended to promote excellence in education of RF and microwave engineers, and encourage significant professional activities in the field. Dr. Madhu S. Gupta, the first occupant of the chair, maintains a major involvement in professional work in the discipline and has received international recognition from his professional peers as a distinguished educator and scholar in the field of RF and microwave engineering.

Courses Acceptable on Master’s Degree Program in Electrical and Computer Engineering (E E) (COMPE)

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

Electrical Engineering (E E)
UPPER DIVISION COURSES

NOTE: Prerequisites will be enforced in all 500-level courses. A copy of an official transcript will be accepted as proof. For corequisites, an enrollment confirmation form will be accepted.

Any course at the 300 level or below must be passed with a grade of C– or better in order to be used as a prerequisite for any subsequent course.

E E 502. Electronic Devices for Rehabilitation (3)
Two lectures and three hours of laboratory. Prerequisite: Electrical Engineering 303 or 330. Recent developments in electronic assistive devices and 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)

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 tests 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.
Discrete-time signals and systems, Sampling, Z-transform, Discrete-time Fourier transform and frequency responses, DFT, FFT, and introduction to IIR and FIR 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 561. Power System Dynamics (3)
Prerequisite: Electrical Engineering 480.
Three-phase faults, symmetrical components, unsymmetrical faults, protective relay operating principles, economic dispatch of thermal power generation units, power system controls, voltage and power stability.

E E 596. Advanced Electrical Engineering Topics (1-3)
Prerequisite: Consent of instructor.
Modern developments in electrical engineering. May be repeated with new content. See Class Schedule for specific content. Maximum credit of nine units for any combination of Electrical Engineering 496 and 596 applicable to a bachelor’s degree. Maximum combined credit of six units of Electrical Engineering 596 and 696 applicable to a 30-unit master’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

Computer Engineering (COMPE) UPPER DIVISION COURSES

NOTE: Prerequisites will be enforced in all 500-level courses. A copy of an official transcript will be accepted as proof. For prerequisites, an enrollment confirmation form will be accepted.

Any course at the 300 level or below must be passed with a grade of C- or better in order to be used as a prerequisite for any subsequent course.

COMPE 560. Computer and Data Networks (3)
Prerequisites: Computer Engineering 271 and Electrical Engineering 410.
Wide area and local area networks, multi-layered protocols, telephone systems, modems, and network applications.

COMPE 561. Windows Database and Web Programming (3)
Prerequisite: Computer Engineering 361.
Programming applications involving file systems, relational databases, Structured Query Language (SQL), ADO.NET, client-server architecture, multithreading sockets, web servers, web browsers, web services, ASP.NET, Hypertext Markup Language (HTML), and Extensible Markup Language (XML).

COMPE 565. Multimedia Communication Systems (3)
Prerequisite: Credit or concurrent registration in Computer Engineering 560.

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 350.
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.

E E 600. Seminar (1-3)
Prerequisite: Consent of instructor.
An intensive study in advance electrical engineering. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

E E 601. Linear System Theory and Design (3)
Prerequisite: Electrical Engineering 420.
State models and solutions of the state equations, stability, controllability and observability, realizability and minimal realizations, linear state and output feedback control, introduction to linear optimal control. (Formerly numbered Electrical Engineering 620.)

E E 602. Stochastic Signals and Systems (3)
Prerequisite: Electrical Engineering 410.
Random signals, correlation functions, power spectral densities, the Gaussian process, narrow band processes. Applications to communication systems. (Formerly numbered Electrical Engineering 553.)

E E 625. Linear Optimal Control (3)
Prerequisite: Electrical Engineering 601.
Optimal control with emphasis on quadratic methods; regulation and tracking using state-feedback; deterministic and statistical estimator design; frequency shaping and model reduction; singular perturbation techniques and suboptimal control; applications to flight control, robotics and control of power systems.

E E 631. RF Electronic Circuits (3)
Prerequisites: Electrical Engineering 410, 430, 602.
Distinguishing characteristics of RF circuits; analysis of noise and nonlinearity in circuits; frequency-selective and impedance-matching networks, RF amplifiers, oscillators and frequency conversion circuits. Phase-locked loops and their applications.
E E 634. RF Circuit Design (3)
Prerequisite: Electrical Engineering 540.
RF component and circuit design in frequency domain and scattering parameter terms. Linear amplifiers, stability considerations, unilateralization, matching techniques, low-noise amplifiers, wideband designs, power amplifiers, linearity considerations, oscillators, and mixers.

E E 641. RF Wireless Systems (3)
Prerequisites: Electrical Engineering 440, 558, 602.
Characteristics and performance measures of RF subsystem in wireless communication systems: wireless channel, antenna, modulators and demodulators, low-noise and power amplifiers, oscillators, ADC and DAC; receiver architectures, system-level design of RF front-end.

E E 642. Optical Communications (3)
Prerequisites: Electrical Engineering 541 or 546.
Advanced topics of interest in electro-optical communications, including lasers, background light sources, modulators, receivers, optical fiber and atmospheric channels, and adaptive techniques.

E E 645. Antennas and Propagation (3)
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 modern wireless and wireline communications. Study moderns for QAM, OFDM, CDMA, and T-1 modulation.

E E 656. Multirate Signal Processing (3)
Prerequisite: Electrical Engineering 556.
DSP techniques for sample rate changes in digital filters. Decimation and interpolation, aliasing as a processing option in resampling filters. Applications in communication and entertainment media systems.

E E 657. Digital Image Processing (3)
Prerequisite: Electrical Engineering 556.
Theory of two-dimensional signals and systems, image transforms, image enhancement, restoration and compression, image analysis and computer vision.

E E 658. Advanced Digital Signal Processing (3)
Prerequisites: Electrical Engineering 556 and 601.
Quantization noise, FIR and IIR filter design (bilinear transform, Parks-McClellan and least squares algorithms, rounding effects), Robust digital filter architectures. Sigma-delta modulation, Orthogonal decompositions and wavelet transform.

E E 660. High Speed Networks: Design Principles and Recent Advances (3)
Prerequisite: Computer Engineering 560.
Provides students with knowledge of recent developments in area of computer networks. Current research in high speed computer networks.

E E 662. Wireless Sensor Networks (3)
Prerequisite: Computer Engineering 565.
Sensor platforms, wireless channel characteristics, time synchronization, medium access control, topology control, routing protocols, localization, coverage and placement, detection and tracking, query processing.

E E 665. Multimedia Wireless Networks (3)
Prerequisite: Computer Engineering 565.
Multimedia source characteristics, compressed bitstreams, error resiliency, quality of service, cellular video telephony, multimedia QoS-aware WLAN, peer to peer networks, and multimedia broadcast multicast services.

E E 672. VLSI System Design (3)
Prerequisite: Computer Engineering 572.
Design of microprocessor data paths and controllers, memory management, pipelines, multipliers, RISC and multiprocessor systems and applications.

E E 675. Hardware and Software Co-Design (3)
Prerequisite: Computer Engineering 475.
Hardware/software co-design and co-verification for a 32-bit microprocessor core based embedded System-on-Chip (SoC) that includes memory, peripherals, direct-memory access, and bus design.

E E 679. Real-Time Software Engineering (3)
Prerequisite: Electrical Engineering 675.

(Same course as Mechanical Engineering 685)
Prerequisite: Mechanical Engineering 585.
Design and manufacturing technology for micro- and nano-scale devices. Topics include solid state transducers, microscale physics, biomedical microelectronics, microfluidics, biosensors, and hybrid integration of microfabrication technology. Emphasis on biomedical applications.

E E 720. Advanced Topics in Control/Power Systems (1-3)
Prerequisites: Graduate level coursework in the area and consent of instructor.
Selected topics in automatic control, robotics, and power 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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Ronald A. Kline, Ph.D., Professor of Mechanical Engineering
Karen D. May-Newman, Ph.D., Professor of Mechanical Engineering
(Bioengineering Graduate Adviser)
Kee S. Moon, Ph.D., Professor of Mechanical Engineering
Khaled B. Morsi, Ph.D., Professor of Mechanical Engineering
Eugene A. Olevsky, Ph.D., Distinguished Professor of Mechanical Engineering and Director of Doctoral Programs in the College of Engineering
Ashaw Beyene, Ph.D., Associate Professor of Mechanical Engineering
Graduate Adviser)
Samuel K. Kassegne, Ph.D., Associate Professor of Mechanical Engineering
Fletcher J. Miller, Ph.D., Assistant Professor of Mechanical Engineering

Adjunct Faculty
Bryan Cornwall, Ph.D., Mechanical Engineering

Courses Acceptable on Master's Degree Programs in Mechanical Engineering (M E)

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

UPPER DIVISION COURSES

NOTE: Proof of Completion of prerequisites required for all Mechanical Engineering 300-, 400-, and 500-level courses: Copy of transcript. In addition, Mechanical Engineering 351, 490A, and 530 require evidence of concurrent registration in appropriate courses.

M E 502. Continuum Mechanics (3)
Prerequisites: Mechanical Engineering 304 (or Civil Engineering 301) and Engineering Mechanics 340.
Mechanics of continua, stress tensor, deformation and flow, constitutive relations. Applications to common solids and fluids

M E 514. Advanced Machine Design (3)
Prerequisites: Mechanical Engineering 314 and 340.
Application of advanced mechanics 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 543. Powder-Based Manufacturing (3)
Prerequisite: Mechanical Engineering 340.
Manufacturing of micro and nano-structured engineering components and composites starting with metal and/or ceramic powders. Powder production methods, characterization, powder shaping and compaction, sintering, hot consolidation, design considerations, and finishing operations.

M E 552. Heating, Ventilating, and Air-Conditioning (3)
Prerequisites: Mechanical Engineering 351 and 452.

M E 555. Energy and Thermal Systems Analysis and Design (3)
Prerequisites: Mechanical Engineering 351 and 452.
Analysis, design, and optimization of thermal systems using microcomputers. Modeling of thermal systems and components. Thermal system component characteristics and their effect on overall system performance. Relationship among thermal sciences in design process. Introduction to thermoeconomic optimization.

M E 556. Solar Energy Conversion (3)
Prerequisites: Engineering Mechanics 340, Mechanical Engineering 351 and 452.
Application of thermodynamics, fluid mechanics and heat transfer to the thermal design of solar energy conversion systems. Computer simulations utilized.

M E 580. Biomechanics (3)
Prerequisites: Mechanical Engineering 304 (or Civil Engineering 301) and Engineering Mechanics 340.

One lecture and four hours of laboratory.
For mechanical engineering majors:
Microfabrication techniques, microsensors and microactuators, and scaling laws. A design project of a micro-device including schematic creation, test of performance, layout generation, and layout versus schematic comparison. (Formerly numbered Engineering Mechanics 585.)

M E 596. Advanced Mechanical Engineering Topics (1-3)
Prerequisite: Consent of instructor. Proof of completion of prerequisite required: Copy of transcript.
Modern developments in mechanical engineering. May be repeated with new content. See Class Schedule for specific content. Maximum credit of nine units for any combination of Mechanical Engineering 496, 499 and 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.
GRADUATE COURSES

M E 610. Finite Element Methods in Mechanical Engineering (3)
Prerequisites: Engineering 280 with a grade of C or better and
Mechanical Engineering 514.
Development of finite elements and an introduction to solution
methods. Problems from various fields of study in mechanical
engineering such as stress analysis, vibrations and heat transfer.
Introduction to finite element programs such as NASTRAN.

M E 621. Mechanical Vibrations (3)
Prerequisites: Mechanical Engineering 520 and Engineering 510.
Topics in vibration relating to mechanical design such as nonlinear
vibrations, distributed mass systems, random vibrations, mobility
analysis, isolator design.

M E 632. Advanced Topics in Automatic Controls (3)
Prerequisite: Mechanical Engineering 530.
Introduction to finite element programs such as NASTRAN.

M E 645. Mechanical Behavior of Engineering Materials (3)
Prerequisites: Mechanical Engineering 314, 340, and 350.
Linear elastic and elastic deformation of monolithic engineering materials
and composites. Dislocation theory and plasticity of crystalline solids.

M E 646. Mechanics of Sintering (3)
Prerequisite: Mechanical Engineering 340.
Practical aspects and conceptual models and mechanisms associated with sintering of ceramic and metal powders.

M E 651. Advanced Thermodynamics (3)
Prerequisites: Engineering 280 with a grade of C or better and
Mechanical Engineering 351.
Advanced concepts of macroscopic thermodynamics are developed including entropy generation, irreversibility, effectiveness,
exergy, and chemical exergy of fuels. Concepts applied to power and
refrigeration cycles using computer software.

M E 653. Combustion (3)
Prerequisite: Mechanical Engineering 351.
Thermodynamics of combustion, chemical equilibrium, chemical
kinetics, combustion of gaseous, liquid and solid fuels, and their
application.

M E 655. Conduction Heat and Transfer (3)
Prerequisites: Mechanical Engineering 452 and Engineering 510.
Conduction heat transfer analysis of multi-dimensional and transient processes using both classical analysis and numerical
methods.

M E 657. Convection Heat Transfer (3)
Prerequisites: Mechanical Engineering 452 and Engineering 510.
Convection heat transfer processes under laminar and turbulent
conditions. Mass transfer. Scaling arguments, analytical and
numerical modeling.

M E 658. Radiation Heat Transfer (3)
Prerequisites: Mechanical Engineering 452 and Engineering 510.
Radiation heat transfer processes. Radiative properties of surfaces
and gases. Absorption, emission, and scattering phenomena.
Numerical modeling.

M E 661. Gas Dynamics (3)
Prerequisites: Mechanical Engineering 351 and Engineering 510.
Thermodynamics of high velocity compressible fluid flow.
Adiabatic and diabatic flow; shock phenomena; imperfect gases;
multidimensional flow. Applications to the propulsive duct and
turbomachinery.

M E 681. Biomaterials (3)
Prerequisites: Mechanical Engineering 240 and 580.
Structure and properties of metallic, ceramic, and polymer biomater-
ials. Chemical interaction with physiological environment.
Thrombosis and hemostasis on synthetic surfaces. Sterilization and
packaging. Ethics and regulatory approval process. Applications
discussed in cardiovascular, pulmonary, renal, orthopedic and dental
medicine.

M E 683. Design of Medical Devices (3)
Prerequisites: Mechanical Engineering 314 and 580.
Device design, including biomaterials, human factors engineering,
reliability, and manufacturing. Topics relevant to industry reviewed
include regulatory, documentation, quality, and legal.

M E 685. Micro-Electro-Mechanical Systems (MEMS) Design and
Applications (3)
(Same course as Electrical Engineering 685)
Prerequisite: Mechanical Engineering 585.
Design and manufacturing technology for micro- and nano-scale
deVICES. Topics include solid state transducers, microscale physics,
biomedical microelectronics, microfluidics, biosensors, and hybrid
integration of microfabrication technology. Emphasis on biomedical
applications.

M E 696. Advanced Topics in Mechanical Engineering (2 or 3)
Intensive study in specific areas of mechanical engineering. May
be repeated with new content. See Class Schedule for specific
content. Credit for 596 and 696 applicable to a master’s degree with
approval of the graduate adviser.

M E 797. Research (1-3) Cr/NC/RP
Prerequisites: Consent of graduate adviser and advancement to
candidacy.
Research in engineering. Maximum credit six units applicable to a
master’s degree.

M E 798. Special Study (1-3) Cr/NC/RP
Prerequisite: Consent of graduate adviser; to be arranged with
department chair and instructor.
Individual study or internship. Maximum credit three units 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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Michael K. Borgstrom, Ph.D., Assistant Professor of English
Phillip Serrato, Ph.D., Assistant Professor of English and Comparative Literature

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Graduate Teaching Assistants
Students who attended SDSU need only submit transcript for work completed since last attendance.

Graduate Assistantships
Graduate students may apply for summer assistantships; contact the graduate director for information.

Associate Professorships
Graduate students may apply for summer associate professorships; contact the graduate director for information.

Associateships and Scholarships
Graduate teaching associateships and graduate assistantships are available to a limited number of qualified students. Teaching associates teaching 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.

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

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

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

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

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

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

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

The following materials should be submitted by December 1 for the fall semester to:
Department of English and Comparative Literature
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-8140

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

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

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

Master of Fine Arts Degree in Creative Writing

The following materials should be submitted by February 1 for the fall semester to:
Department of English and Comparative Literature
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-8140

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

Master of Arts Degree in English

Admission to the Degree Curriculum

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

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

1. Classified Graduate Standing
   a. Conditional acceptance may be granted if there is a deficiency in any of the above requirements. A student accepted conditionally must customarily achieve an average of 3.25 in nine units of English or comparative literature courses with no grade less than B– before proceeding to further study and is limited to 12 units. Any units taken above this quota will not count toward the 30 units for the master's degree in English.
   b. English major unit deficiencies. Students who lack 24 units of credit in upper division courses in English or in foreign language literature or comparative literature courses will be considered for conditional standing if they meet the requirements of 2.85 overall and achieve a minimum score of 550 on the verbal section of the Graduate Record Examination and a minimum of 5.0 on the GRE analytical essay examination. After the completion of 24 units for the undergraduate major, students will be considered for classified graduate standing if they meet the other requirements. Students choosing a comparative literature specialization may substitute 24 units of upper division coursework in foreign language literature or comparative literature courses for part of this requirement.

2. Conditional Classified Graduate Standing
   a. Conditional acceptance may be granted if there is a deficiency in any of the above requirements. A student accepted conditionally must customarily achieve an average of 3.25 in nine units of English or comparative literature courses with no grade less than B– before proceeding to further study and is limited to 12 units. Any units taken above this quota will not count toward the 30 units for the master's degree in English.

   b. English major unit deficiencies. Students who lack 24 units of credit in upper division courses in English or in foreign language literature or comparative literature courses will be considered for conditional standing if they meet the requirements of 2.85 overall and achieve a minimum score of 550 on the verbal section of the Graduate Record Examination and a minimum of 5.0 on the GRE analytical essay examination. After the completion of 24 units for the undergraduate major, students will be considered for classified graduate standing if they meet the other requirements. Students choosing a comparative literature specialization may substitute 24 units of upper division coursework in foreign language literature or comparative literature courses for part of this requirement.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, including the foreign language requirement, as stated in Part Four of this bulletin. Each candidate, with the approval of the graduate director, may fulfill the foreign language requirement in one of several ways: (1) by passing a local examination administered by one of the university's foreign language departments, (2) by completing one three-unit upper division foreign language literature course with readings in the original language with a grade of C (2.0) or better, or (3) by passing an examination to be determined by the graduate adviser if the chosen language is one not taught in a department at San Diego State University.

Specific Requirements for the Master of Arts Degree

(Major Code: 15011) (SIMS Code: 112101)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete a 30-unit program of study, approved by the department's director of graduate studies, with at least 21 units of 600- and 700-numbered courses. The major includes a specialization in one of five program areas: American literature, British literature, children's literature, comparative literature, or rhetoric and writing. Students specializing in literature may choose Plan A (thesis) or Plan B (portfolio assessment).

Specialization in American Literature

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

Core Course (3 units):
ENGL 600 Introduction to Graduate Study (3)

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

With the consent of the graduate adviser, English 798, with appropriate content, may be substituted for one of the above courses.)
Electives: Diversification in Literary and Writing Research. With the approval of the graduate adviser, 15 units selected from other English and comparative literature departmental graduate offerings. At least six units of these elective units must be taken outside of specialization and from other specializations within the English M.A. program. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

Culminating Experience:
Plan A: (Thesis) – ENGL 799A (3 units)
Plan B: (Portfolio Assessment and Defense) – ENGL 790 or an additional three unit 700-level course in English with the approval of the graduate adviser.

Specialization in British Literature
(Major Code: 15011) (SIMS Code: 112104)
Core Course (3 units):
ENGL 600 Introduction to Graduate Study (3)

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

Electives: Diversification in Literary and Writing Research. With the approval of the graduate adviser, 15 units selected from other English and comparative literature departmental graduate offerings. At least six of these elective units must be taken outside of specialization and from other specializations within the English M.A. program. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

Culminating Experience:
Plan A: (Thesis) – ENGL 799A (3 units)
Plan B: (Portfolio Assessment and Defense) – ENGL 790 or an additional three unit 700-level course in English with the approval of the graduate adviser.

Specialization in Comparative Literature
(Major Code: 15011) (SIMS Code: 112115)
Core Course (3 units):
ENGL 600 Introduction to Graduate Study (3)

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

Electives: Diversification in Literary and Writing Research. With the approval of the graduate adviser, 15 units selected from other English and comparative literature departmental graduate offerings. At least six of these elective units must be taken outside of specialization and from other specializations within the English M.A. program. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

Culminating Experience:
Plan A: (Thesis) – ENGL 799A (3 units)
Plan B: (Portfolio Assessment and Defense) – ENGL 790 or an additional three unit 700-level course in English with the approval of the graduate adviser.

Specialization in Rhetoric and Writing
(Major Code: 15011) (SIMS Code: 112160)
Core Course (3 units):
ENGL 600 Introduction to Graduate Study (3)

Rhetoric and Writing Research Focus. With prior approval by the graduate adviser, a student will select nine units from the following:
RWS 640 Research Methods in Rhetoric and Writing Studies (3)
RWS 640A Reading and Writing Rhetorically (3)
RWS 602 Modern Rhetoric and Composition Studies (3)
RWS 602A History of Rhetoric I (3)
(With the consent of the graduate adviser, English 798, with appropriate content, may be substituted for one of the above courses.)

Electives: Diversification in Literary and Writing Research. With the approval of the graduate adviser, 15 units selected from other English and comparative literature departmental graduate offerings. At least six of these elective units must be taken outside of specialization and from other specializations within the English M.A. program. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

Culminating Experience:
Plan A: (Thesis) – ENGL 799A (3 units)
Plan B: (Portfolio Assessment and Defense) – ENGL 790 or an additional three unit 700-level course in English with the approval of the graduate adviser.
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 a B-. Students will be permitted to repeat only one course to achieve these levels.

In addition, the M.F.A. graduate 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 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 an M.A. or Ph.D. in other fields, for those who wish to undertake a shorter schedule of study than required for the M.A., for those wishing to update their knowledge (parents, teachers, librarians), and for postbaccalaureate students interested in children’s and adolescent books. Teachers and other professionals will use the certificate for advancement in employment; other students will find it to be an excellent professional entree or upgrade in publishing, editing, writing, or selling children’s books.

A 3.0 grade point average is required of matriculated students. Non-matriculated students’ applications will be reviewed for relevant and sufficient preparation.

The advanced certificate requires 12 units selected from English 604D, 606D, 627, 700, 727, and three to six units of the 12 units selected from English 501, 502, 503. Units taken to complete the advanced certificate may be applied to an M.A. degree in English or Comparative Literature with approval of the graduate adviser. Contact the director of the children’s literature program for additional information.
Courses Acceptable on the Master's Degree Programs in Creative Writing and English (ENGL) (C LT)
Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

English (ENGL)

UPPER DIVISION COURSES

NOTE: Prerequisite for all 500-level courses: Six lower division units in courses in literature and/or creative writing.

ENGL 501. Literature for Children (3)
Prerequisites: Six lower division units in literature and/or creative writing.
Critical analysis of literature intended for children. Study of texts and illustrations. This course cannot be used in place of English 401 to satisfy General Education requirements.

ENGL 502. Adolescence in Literature (3)
Prerequisites: Six lower division units in literature and/or creative writing.
Works centrally concerned with an adolescent protagonist. Includes both traditional novels of development (Bildungsroman) and contemporary young adult novels.

ENGL 503. Topics in Children's Literature (3)
Prerequisites: Six lower division units in literature and/or creative writing.
Topics in children's and adolescents' literatures such as regionalism, multiculturalism, fantasy, science fiction, non-fiction, illustrated books, nineteenth-century classics, major works by twentieth-century authors, British children's literature, the noir young adult novel, and the history of genre. Maximum credit six units.

ENGL 508W. The Writing of Criticism (3)
Prerequisites: Six lower division units in literature and/or creative writing. Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units; completed Writing Placement Assessment with a score of 8 or higher (or earned a C or higher in RWS 280, 281, or LING 281 if score on WPA was 7 or lower); and completed General Education requirements in Composition and Critical Thinking.
Proof of completion of prerequisites required: Test scores or verification of exemption; copy of transcript.
Theory and practice of literary criticism. Emphasis on the work of important critics and on development of student's own critical writing.

ENGL 519. Ethnic Literatures of the United States (3)
Prerequisites: Six lower division units in literature and/or creative writing.
Works from United States ethnic literatures, with emphasis on formerly excluded traditions as African-American, Hispanic and Chicano, Asian-American, and American Indian.

ENGL 520. African-American Literary Tradition (3)
Prerequisites: Six lower division units in literature and/or creative writing.
African-American literature from its eighteenth-century beginnings to the present. Early political and social concerns and concomitant utilitarian forms; aesthetic concerns and forms in nineteenth and twentieth centuries.

ENGL 521. Early American Literature (3)
Prerequisites: Six lower division units in literature and/or creative writing.
Representative works by American writers from the colonial period through the Revolution; to include works by Anne Bradstreet, Phyllis Wheatley, Olaudah Equiano, Cotton Mather, Jonathan Edwards, Benjamin Franklin, Thomas Jefferson, various Native American speakers and writers, and others.

ENGL 522. Literature of the United States, 1800-1860 (3)
Prerequisites: Six lower division units in literature and/or creative writing.
Representative works by United States writers from 1800 to 1860; likely to include works by Emerson, Hawthorne, Melville, Poe, Stowe, Thoreau, Whitman, and others.

ENGL 523. Literature of the United States, 1860-1920 (3)
Prerequisites: Six lower division units in literature and/or creative writing.
Representative works by United States writers from 1860 to 1920; likely to include works by Charles Chesnutt, Kate Chopin, Stephen Crane, Emily Dickinson, Henry James, Mark Twain, Edith Wharton, and others.

ENGL 524. Literature of the United States, 1920-1960 (3)
Prerequisites: Six lower division units in literature and/or creative writing.
Representative works by United States writers from 1920 to 1960; likely to include works by Willa Cather, T. S. Eliot, William Faulkner, F. Scott Fitzgerald, Ernest Hemingway, Zora Neale Hurston, Eugene O'Neill, Katherine Anne Porter, Ezra Pound, John Steinbeck, and others.

ENGL 525. Literature of the United States, 1960 to Present (3)
Prerequisites: Six lower division units in literature and/or creative writing.
United States writers from 1960 to the present; likely to include works by Edward Albee, Saul Bellow, Allen Ginsberg, Joseph Heller, Maxine Hong Kingston, Norman Mailer, Tony Morrison, Sylvia Plath, Adrienne Rich, Kurt Vonnegut, Eudora Welty, and others.

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

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

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

ENGL 530. Chaucer (3)
Prerequisites: Six lower division units in literature and/or creative writing.
Chaucer’s works, with emphasis on The Canterbury Tales and Troilus and Criseyde.

ENGL 533. Shakespeare (3)
Prerequisites: Six lower division units in literature and/or creative writing.
An introduction to the writings of Shakespeare. This course cannot be used in place of English 302 to satisfy General Education requirements.

ENGL 534. Study of Shakespeare (3)
Prerequisite: English 533.
Advanced study of Shakespeare’s achievement as poet and playwright. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

ENGL 536. British Literary Periods, Beginnings to 1660 (3)
Prerequisites: Six lower division units in literature and/or creative writing.
Study of a literary period such as the Middle Ages or Renaissance. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.
ENGL 537. Milton (3)  
Prerequisites: Six lower division units in literature and/or creative writing.  
Milton’s writings, with emphasis on Paradise Lost.

ENGL 540A-540B. English Fiction (3-3)  
Prerequisites: Six lower division units in literature and/or creative writing.  

ENGL 541A-541B. English Drama (3-3)  
Prerequisites: Six lower division units in literature and/or creative writing.  
English dramatic literature from its beginnings to the present. Semester I: From the beginning to 1642. Semester II: Period following reopening of the theatres in 1660.

ENGL 542. British Literary Periods, 1660-1800 (3)  
Prerequisites: Six lower division units in literature and/or creative writing.  
Study of a literary period such as the Restoration or Enlightenment. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

ENGL 543. British Literary Periods, 1800-1900 (3)  
Prerequisites: Six lower division units in literature and/or creative writing.  
Study of a literary period such as the Romantic or Victorian Age. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

ENGL 544. British Literary Periods, 1900-Present (3)  
Prerequisites: Six lower division units in literature and/or creative writing.  
Study of a literary period such as the Postmodern Era. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

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

ENGL 563. Literature and Culture (3)  
Prerequisites: Six lower division units in literature and/or creative writing.  
Study of literature in relation to a specific culture idea or phenomenon, such as literature and the law, literature and technology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

ENGL 570. Techniques of Poetry (3)  
Prerequisites: Three lower division units in literature and/or creative writing and English 280.  
Techniques of poetry from the writer’s point of view. Introduction to critical and theoretical literature on poetry. Includes a creative writing workshop.

ENGL 571. Techniques of the Short Story (3)  
Prerequisites: Three lower division units in literature and/or creative writing and English 280.  
Techniques of the short story from the writer’s point of view. Introduction to critical and theoretical literature on the short story. Includes a creative writing workshop.

ENGL 573. Techniques of the Novel (3)  
Prerequisites: Three lower division units in literature and/or creative writing and English 280.  
Techniques of the novel from the writer’s point of view. Introduction to critical and theoretical literature on the novel. Includes a creative writing workshop.

ENGL 576. Literary Editing and Publishing (3)  
Prerequisites: Three lower division units in literature and/or creative writing and English 280.  
Principles and practices of editing and literary publishing. Workshop on small press publishing. Includes editing and publishing workshop.

ENGL 577. Techniques of Screenwriting (3)  
Prerequisites: Six lower division units in literature and/or creative writing. English 280 or Television, Film, and New Media 110 or 510 for television, film, and new media majors.  
Techniques of screenwriting. Introduction to critical and theoretical literature on screenwriting. Includes a creative writing workshop.

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

ENGL 580. Writing of Poetry (3)  
Prerequisites: Six lower division units in literature and/or creative writing and English 570.  
A creative writing workshop in poetry. Continuation of English 570. Maximum credit six units.

ENGL 581W. Writing of Fiction (3)  
Prerequisites: Three lower division units in literature and/or creative writing and English 280. Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units; completed Writing Placement Assessment with a score of 8 or higher (or earned a C or higher in RWS 280, 281, or LING 281 if score on WPA was 7 or lower); and completed General Education requirements in Composition and Critical Thinking. Proof of completion of prerequisites required: Test scores or verification of exemption; copy of transcript.  
A creative writing workshop in fiction. Continuation of English 571. Maximum credit six units.

ENGL 583. Writing Long Narrative (3)  
Prerequisites: Six lower division units in literature and/or creative writing and English 573.  
A creative writing workshop in long narrative, especially the novella or novel. Continuation of English 573. Maximum credit six units.

ENGL 584W. Writing Informal Essays (3)  
Prerequisites: Three lower division units in literature and/or creative writing and English 280. Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units; completed Writing Placement Assessment with a score of 8 or higher (or earned a C or higher in RWS 280, 281, or LING 281 if score on WPA was 7 or lower); and completed General Education requirements in Composition and Critical Thinking. Proof of completion of prerequisites required: Test scores or verification of exemption; copy of transcript.  
A creative writing workshop in nonfiction, especially the essay as an art form. Maximum credit six units.

ENGL 587. Writing the Screenplay (3)  
Prerequisites: Three lower division units in literature and/or creative writing. English 577 or Television, Film, and New Media 110 or 510 for television, film, and new media majors.  
A creative writing workshop in screenwriting with emphasis on the feature film. Continuation of English 577. Includes playwriting and revising a television script or short film. Maximum credit six units.

ENGL 596. Selected Topics in English (1-3)  
Prerequisites: Three lower division units in literature and/or creative writing. English 577 or Television, Film, and New Media 110 or 510 for television, film, and new media majors.  
Selected topics in English. May be repeated with new content and approval of instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.
Comparative Literature (C LT)  
UPPER DIVISION COURSES

NOTE: Prerequisite for all 500-level courses: Six units in literature or three units in literature and three units in a related area appropriate to the course in question.

C LT 512. European Literature Before 1800 (3)  
Study of a literary period such as the Middle Ages, Renaissance, or Enlightenment. May be repeated with new content. Maximum credit six units.

C LT 513. Nineteenth Century European Literature (3)  
European literature of the nineteenth century or of a more limited period within that century. May be repeated with new content. Maximum credit six units.

C LT 514. European Literature Since 1900 (3)  
Study of a literary period such as the Age of Modernism. May be repeated with new content. Maximum credit six units.

C LT 530. Topics in Asian Literature (3)  
Specialized study of a selected topic in Asian literature. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

C LT 561. Fiction (3)  
A comparative approach to themes and forms in fiction (novel and short story). Focus of course to be set by instructor. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

C LT 562. Drama (3)  
Forms and themes in drama. Focus of course to be set by instructor. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

C LT 563. Poetry (3)  
A comparative approach to themes and forms in poetry. Focus of course to be set by instructor. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

C LT 571. Literary Use of Legend (3)  
Literary treatment of such legendary figures as Don Juan, Faust, and Ulysses, in a wide range of literature and genres. See Class Schedule for specific content.

C LT 577. Major Individual Authors (3)  
In-depth study of the works of a major author, such as Dante, 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 theory. Recommended for first-semester graduate students.

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

ENGL 602. Literary Theory and Critical Practice (3)  
Prerequisite: Credit or concurrent registration in English 600. Major issues in the history of literary criticism as well as contemporary approaches. Study of criticism and theory accompanied by writing practicum. Students will write in several critical modes and build graduate level proficiency in analyzing literary issues. Prerequisite to 700-level seminars.

ENGL 604. Seminar: Literary Period or Movement (3)  
Prerequisites: An appropriate upper division or graduate level background course: credit or concurrent registration in English 600. Advanced study, through its literature, of a literary period such as the Renaissance, or a movement such as American modernism. May be repeated with new content. Maximum credit six units applicable to a master's degree.

A. American Literature  
B. British Literature  
C. Comparative Literature  
D. Children's Literature

ENGL 606. Topics in Comparative Literature (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.

 Roots and development of children's literature as a distinct field, from oral literature to contemporary explosions of publications.
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)
Prerequisites: At least two courses selected from English 600, 601, and 602.
Issues and topics of special interest to children’s literature, such as gender depictions, commodification, cross-over writing, and regionalism. Maximum credit six units applicable to a master’s degree.

ENGL 730. Seminar: Perspectives in Critical Analysis (3)
Prerequisites: English 600 and 602.
Advanced study of analytical perspectives such as contemporary literary theory, feminist poetics, canon and exclusion, literature and other arts, literature and other disciplines.

ENGL 750F. M.F.A. Seminar: Fiction Writing (3)
Prerequisite: Open only to students admitted to M.F.A. in creative writing.
Advanced seminar in fiction writing. May include readings in contemporary fiction and narrative theory. Students in fiction focus must take course six times, generating new work each time with various instructors. Maximum credit 18 units applicable to a master's degree.

ENGL 750P. M.F.A. Seminar: Poetry Writing (3)
Prerequisite: Open only to students admitted to M.F.A. in creative writing.
Advanced seminar in poetry writing. May include readings in contemporary poetry and theory. Students in poetry focus must take course six times, generating new work each time with various instructors. Maximum credit 18 units applicable to a master's degree.

ENGL 784. Seminar: Creative Non-Fiction (3)
Prerequisite: Six units of graduate level creative writing courses.
Advanced approach to writing book reviews and short critical essays. Professional focuses necessary for these forms. Emphasis on writing, reading, research, and direct function of these processes.

ENGL 790. Seminar: Portfolio/Examination Preparation (3) Cr/NC
Prerequisites: Twenty-four units of graduate coursework that counts toward the M.A. in English. Student must be in final semester of study for the master’s degree.
Preparation, with close faculty supervision, of scholarly essays for portfolio assessment and oral defense. Advanced study of critical approaches, development of sophisticated research methodology, and close attention to scholarly writing.

ENGL 796. Internship (3) Cr/NC
Prerequisite: Advancement to candidacy for the Master of Arts degree in English and comparative literature or admission to the Master of Fine Arts program and consent of the graduate adviser and supervising professor.
Work experience with a practicing professional or company in the community, such as working as editorial assistant or teacher intern.

ENGL 797. Thesis Research (3) Cr/NC/RP
Prerequisites: Advancement to candidacy in the M.F.A. degree in creative writing.
Independent work in general field of candidate’s thesis project.

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

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

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

ENGL 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program courses.
Registration required of students whose only requirement is completion of the comprehensive examination for the master’s degree. Registration in 799C limited to two semesters.
Exercise Physiology
In the School of Exercise and Nutritional Sciences
In the College of Professional Studies and Fine Arts

OFFICE: Exercise and Nutritional Sciences 351
TELEPHONE: 619-594-5541
http://ens.sdsu.edu

Faculty
Fred W. Kolkhorst, Ph.D., Professor of Exercise and Nutritional Sciences, Director of School
Michael J. Buono, Ph.D., Professor of Exercise and Nutritional Sciences
Jeanne F. Nichols-Bernhard, Ph.D., Professor of Exercise and Nutritional Sciences
Larry S. Verity, Ph.D., Professor of Exercise and Nutritional Sciences
(Graduate Adviser)

Associateships and Assistantships
Graduate teaching associateships are available for a limited number of qualified students. These provide essential education, technical training, and creative experience necessary for future professional and scholarly activity or college-level teaching. Graduate assistantships are also available in some cases to aid faculty research. Application blanks and additional information on graduate programs may be obtained from the School of Exercise and Nutritional Sciences Web site at http://ens.sdsu.edu.

General Information
The School of Exercise and Nutritional Sciences offers graduate study leading to the Master of Science degree in exercise physiology and a concurrent graduate program leading to a Master of Science degree in nutritional science and M.S. degree in exercise physiology. The major objective of the concurrent graduate program is to offer preparation in the interrelated fields of nutritional science and exercise physiology.

The Master of Science degree in exercise physiology has strong theoretical and practical components that provide a basis for students who anticipate employment in the field of rehabilitative and/or preventive exercise, as well as for those who intend to pursue a doctoral degree in exercise science. The faculty includes researchers who are professionally active in areas such as thermoregulation, nutrition and metabolism, exercise and aging, cardiac and metabolic pathophysiology, and environmental physiology. The school provides the students an opportunity to gain exercise-related experience under the close supervision of faculty. Graduate students learn pragmatic skills, such as physiological testing, exercise training, and participant education in the field of preventive and clinical exercise programming.

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

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

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

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

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

Master of Science Degree in Exercise Physiology

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 adviser and the graduate adviser. This official program of study is developed when the student has completed between 12 and 21 units of study, and must be filed with the Division of Graduate Affairs as a prerequisite for advancement to candidacy.

The school expects a student to complete the degree within seven years. Failure to complete the degree requirements within seven years will result in dismissal from the program.

Required courses (36 units):
- ENS 601 Experimental Methods in Exercise and Nutritional Sciences (3)
- ENS 602 Research Evaluation in Exercise and Nutritional Sciences (3)
- ENS 632 Physiological Chemistry of Exercise (3)
- ENS 659 Exercise Cardiology and Pathology (3)
- ENS 661 Seminar in Advanced Physiology of Exercise (3)
- ENS 662 Advanced Exercise Physiology Laboratory (3)
- ENS 666 Adult Fitness: Exercise Prescription (3)
- ENS 668 Adult Fitness: Exercise Leadership and Administration (3)
- ENS 790 Exercise Specialist Internship (3) Cr/NC
- ENS 799A Thesis or Project (3) Cr/NC/RP

OR

Electives (6 units): Electives to be selected with approval of graduate adviser.

Master of Science Degree in Nutritional Science and Master of Science Degree in Exercise Physiology

Admission to the Degree Curriculum

All students must satisfy the general requirements for admission to the university with classified graduate standing as described in Part Two of this bulletin. In addition, a student applying for admission to the concurrent program in nutritional science and exercise physiology must meet the following requirements.

1. A grade point average (GPA) of at least 3.0 in the last 60 units of coursework.
2. A bachelor's degree in foods and nutrition, exercise science, kinesiology, physical education, or related fields. Students will be required to complete or have equivalent preparation in Biology 212, 336, Chemistry 100, 130, 160, Nutrition 201, 302, 302L, and Exercise and Nutritional Sciences 303, 304, 304L, and an undergraduate statistics course.
3. A minimum score of 475 on each of the verbal and quantitative sections of the GRE General Test.

Students will be admitted ONLY in the fall semester. Submit applications no later than February 1.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Four of this bulletin.

Specific Requirements for the Master of Science in Nutritional Science and Master of Science in Exercise Physiology
(Major Code: 08356) (SIMS Code: 662990)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete an officially approved course of study of not less than 48 units as outlined below. Also, students complete their degree by choosing either Plan A or Plan B. In Plan A, all students will include Nutrition 799A (thesis) or Exercise and Nutritional Sciences 799A (thesis) for completion of their degree, accompanied by a final oral examination on the field of the thesis and on the implications of the thesis research for the broader field of exercise and nutritional sciences. If students select Plan B, Exercise and Nutritional Sciences 790 (Directed Readings) is required for completion of the degree.

Plan A

- ENS 601 Experimental Methods in Exercise and Nutritional Sciences (3)
- ENS 602 Research Evaluation in Exercise and Nutritional Sciences (3)
- ENS 632 Physiological Chemistry of Exercise (3)
- ENS 659 Exercise Cardiology and Pathology (3)
- ENS 661 Seminar in Advanced Physiology of Exercise (3)
- ENS 662 Advanced Exercise Physiology Laboratory (3)
- ENS 666 Adult Fitness: Exercise Prescription (3)
- ENS 668 Adult Fitness: Exercise Leadership and Administration (3)
- ENS 796 Exercise Specialist Internship (3) Cr/NC
- ENS 798 Special Study (2) Cr/NC/RP
- NUTR 600 Seminar: Foods and Nutrition (3)
- NUTR 607 Child Nutrition (3)
- NUTR 608 Geriatric Nutrition (3)
- NUTR 610 Nutrition and Energy (3)
- NUTR 700 Seminar in Nutrition (3)
- NUTR 798 Special Study (1) Cr/NC/RP

OR

Plan B

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

OR

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

If a student, after entering the concurrent program leading to a Master of Science degree in nutritional science and a Master of Science degree in exercise physiology, returns to a single degree program, all the requirements for the single degree program may then be met.

The school expects the student to complete the degree requirements within seven years. Failure to complete the degree requirements within seven years will result in dismissal from the program.
Courses Acceptable on Master's Degree Programs (ENS)

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

UPPER DIVISION COURSE
Exercise and Nutritional Sciences Course
ENS 596. Selected Topics in Exercise and Nutritional Sciences (1-3)
Selected topics in exercise and nutritional sciences. May be repeated with new content and approval of instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES
Exercise and Nutritional Sciences Courses
ENS 601. Experimental Methods in Exercise and Nutritional Sciences (3)
Prerequisite: Undergraduate statistics course.
Experimental methods in exercise and nutritional science.

ENS 602. Research Evaluation in Exercise and Nutritional Sciences (3)
Prerequisite: Exercise and Nutritional Sciences 601.
Techniques in designing, conducting, and reporting research in exercise and nutritional science. Qualitative and quantitative paradigms examined. Ethical consideration of human research.

ENS 632. Physiological Chemistry of Exercise (3)
Prerequisite: Exercise and Nutritional Sciences 661.
Biochemical and metabolic responses of the human body to acute and chronic exercise. Neuroendocrine control of fuel regulation during exercise.

ENS 659. Exercise Cardiology and Pathology (3)
Prerequisites: Exercise and Nutritional Sciences 304 and 304L.
Interpretation of resting and exercise electrocardiograms with cardiopulmonary pathologies that skew interpretations.

ENS 661. Seminar in Advanced Physiology of Exercise (3)
Prerequisites: Exercise and Nutritional Sciences 303 and 304.

ENS 662. Advanced Exercise Physiology Laboratory (3)
Nine hours of laboratory.
Prerequisites: Exercise and Nutritional Sciences 304, 304L, and admission to program in Exercise Physiology.
Laboratory course designed to develop competency in respiratory metabolism pulmonary function, gas analysis, blood chemistry and ergometry. Experience in the application of exercise procedures with human subjects and analysis and interpretation of results.

ENS 666. Adult Fitness: Exercise Prescription (3)
Prerequisites: Exercise and Nutritional Sciences 304 and 304L.
Physical conditioning programs for the prevention, rehabilitation, and control of diseases associated with aging adults. Topics include disease etiology, health/disease evaluation, and exercise prescription for apparently healthy and diseased adults.

ENS 668. Adult Fitness: Exercise Leadership and Administration (3)
One lecture and six hours of laboratory.
Prerequisites: Exercise and Nutritional Sciences 666.
Administration of and role of exercise programs in preventive medicine, corporate fitness, and Phase I, II, and III of cardiac rehabilitation, and other disease rehabilitation. Development of skills in exercise leadership in traditional and experimental exercise programs for the apparently healthy and diseased adult.

ENS 696. Advanced Topics in Exercise and Nutritional Sciences (3)
Intensive study in specific areas of exercise and nutritional sciences. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

ENS 790. Seminar in Directed Readings (3) Cr/NC
Prerequisites: Exercise and Nutritional Sciences 602 and advancement to candidacy.
Preparation for comprehensive examination for students pursuing either an M.A. or an M.S. degree under Plan B.

ENS 796. Exercise Specialist Internship (1-3) Cr/NC
Prerequisites: Exercise and Nutritional Sciences 659, 662, 668.
Supervised application of exercise laboratory testing, test interpretation, exercise prescription and exercise leadership in adult fitness, corporate fitness, preventive medicine and/or hospital disease rehabilitation setting.

ENS 798. Special Study (1-3) Cr/NC/RP
Prerequisite: Consent of department chair.
Individual study. Maximum credit six units applicable to a master’s degree.

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

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

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

Finance
Refer to “Business Administration” in this section of the bulletin.
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
Anne Donadey, Ph.D., Professor of French and Women’s Studies,
Chair of Department (Graduate Adviser)
Mary Ann Lyman-Hager, Ph.D., Professor of French
Steven J. Sacco, Ph.D., Professor of French
James L. Schorr, Ph.D., Professor of French

Associateships
Graduate teaching associateships in French are available to a
limited number of qualified students. Application forms and additional
information may be secured from the Department of European Studies.

General Information
Research areas of the graduate faculty cover all periods of French
and Francophone literature and culture. In particular, the department
includes specialists in fields such as Francophone literature and
cultural studies, medieval and renaissance cultural studies,
eighteenth century literature, theatre and film studies, Quebec, inter-
national business, and second language acquisition and technology.
SDSU houses a federally-funded National Language Resource
Center, which conducts research and dissemination projects in all
areas of language and culture. Further, we have a state-of-the-art
research library.

The graduate program in French offers opportunities for well-
qualified M.A. candidates to complete up to nine units of their 30 unit
official program on a study abroad program. Graduate students may
participate in the CSU International Programs, ISEP, or the SDSU Paris
Semester. An M.A. degree earned in the program can provide students
with university-level teaching experience and access to
community college level teaching positions. Students who earn an
M.A. in French at SDSU may also continue on to a Ph.D. program
or pursue a variety of careers in areas where knowledge of French
language and culture are necessary.

Admission to Graduate Study
The student must satisfy the general requirements for admission to
the university with classified standing, as described in Part Two of this
bulletin. In addition, the student must satisfy the following require-
ments: (1) an undergraduate major in French, or its equivalent,
including 30 upper division units, at least six units of which must be in
a survey course in French literature; (2) a GPA of 3.0 (on a 4-point
scale) in all upper division French courses; (3) a minimum score of
500 on the verbal section and 450 on the quantitative section of the
Graduate Record Examination (GRE) General Test.

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

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

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

(1) Official transcripts (in sealed envelopes) from all
postsecondary institutions attended;
Note:
• Students who attended SDSU need only submit 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) English language score, if medium of instruction was in a
language other than English (http://www.ets.org, SDSU
institution code 4682);

Department of European Studies
The following materials should be mailed or delivered to:
Department of European Studies
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7704

(1) Three letters of recommendation from professors, at least two of
which should be from professors of French at the institution
where the degree was granted (in sealed and signed
envelopes);
(2) A writing sample (your best paper written in French, preferably
for a literature class);
(3) The filled out graduate teaching assistant application form if
you are interested in teaching French in the program. The
graduate teaching assistant form should be requested from the
graduate adviser for the M.A. in French before the application
deadline.

Advancement to Candidacy
All students will be required to pass a qualifying examination in
French given by the Department of European Studies. This
examination will also satisfy the foreign language requirement as
stated in Part Four of this bulletin.

Specific Requirements for the Master of
Arts Degree
(Major Code: 11021) (SIMS Code: 112701)

In addition to meeting the requirements for classified graduate
standing and the basic requirements for the master’s degree as
described in Part Four of this bulletin, the student must complete a
graduate program of at least 30 units which includes a major
consisting of at least 24 units in French, of which at least 18 units must
be in 600- and 700-numbered courses in French, including French
799A, Thesis, for those following Plan A.

Students, with the consent of the graduate adviser, may elect Plan
A, which includes French 799A, Thesis (minimum GPA 3.6), or Plan B,
which includes written and oral examinations in lieu of the thesis.
Courses Acceptable on Master's Degree Program in French (FRENC)

NOTE: All upper division courses in French are taught in French unless otherwise stated.

Related courses (500 and graduate level) in other departments may be taken for a total of six units credit with prior approval of the graduate adviser.

UPPER DIVISION COURSES

FRENC 501. Translation (3)
Prerequisite: French 302.
Stylistic comparison of French and English through translation of a variety of prose styles from English to French and from French to English.

FRENC 520. French and Francophone Literary Studies (3)
Prerequisites: French 302 and 305A or 305B.
Specialized study of a century, genre, movement or theme in French and Francophone literature. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

FRENC 530. French and Francophone Cultural Studies (3)
Prerequisites: French 302 and 421 or 422.
Specialized study of artistic and intellectual trends, customs, and politics in French and Francophone culture. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

FRENC 596. Topics in French Studies (1-4)
Prerequisite: French 302.
Topics in French literature, culture, and linguistics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

GRADUATE COURSES

FRENC 621. Critical Methods (3)
Prerequisite: Eighteen upper division units in French.
Methods and theories of critical analysis and their application to the works of a major French author or literary genre.

FRENC 631. Issues in French and Francophone Studies (3)
Prerequisite: Graduate standing.
Study of a theme, theoretical or literary movement, or historical moment. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

FRENC 696. Topics in French Studies (3)
Prerequisite: Eighteen upper division units in French.
Intensive study in specific areas of French. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

FRENC 700. Seminar: A Major French or Francophone Author (3)
Prerequisite: Eighteen upper division units in French.
In-depth study of works of a major French or Francophone author. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

FRENC 710. Seminar in a Literary Genre (3)
Prerequisite: Eighteen upper division units in French.
Study of a specific literary genre, e.g. poetry, novel, theater. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

FRENC 720. Seminar in French and Francophone Culture and Civilization (3)
Prerequisite: Eighteen upper division units in French.
Study of a specific topic in French and Francophone culture and civilization. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

FRENC 798. Special Study (1-3) Cr/NC/RP
Prerequisites: Advancement to candidacy and approval of graduate adviser.
Individual study. Maximum credit three units applicable to a master’s degree.

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

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

FRENC 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program courses.
Registration required of students whose only requirement is completion of the comprehensive examination for the master’s degree. Registration in 799C limited to two semesters.
Geography
In the College of Arts and Letters

OFFICE: Storm Hall 323
TELEPHONE: 619-594-5437 / FAX: 619-594-4938

Faculty
Stuart C. Aikin, Ph.D., Professor of Geography, Chair of Department
Edward Aguado, Ph.D., Professor of Geography, Assistant Dean for Student Services, Policy and Curriculum in the Division of Graduate Affairs
George Christakos, Ph.D., Professor of Geography, The Stephen and Mary Birch Foundation Chair in Geographical Studies
Stuart C. Aitken, Ph.D., Professor of Geography, Faculty
TELEPHONE: 619-594-5437 / FAX: 619-594-4938
OFFICE: Storm Hall 323
In the College of Arts and Letters
Geography

General Information
The Department of Geography offers graduate study leading to the Master of Arts, Master of Science, and Doctor of Philosophy degrees in geography. These degrees provide the essential education, technical training, and creative experience necessary for professional activity or college-level teaching. Graduate programs are generally assigned around one of the following systematic areas:

Group A – Systematic Areas
- Human Geography — Urban, Social, and Political Geography
- Environmental Geography — Society and Environment, Watershed/Ecosystems Analysis
- Physical Geography — Biogeography, Climatology, Hydrology, Landscape Ecology

Group B – Spatial Analytical Methods and Techniques
- Spatial Quantitative and Qualitative Methods
- Cartography and Internet Mapping
- Geocomputation and Spatial Modeling
- Geographic Information Systems (GIS)
- Remote Sensing and Image Processing
- Visualization and Visual Data Mining
- Spatial Decision Support Systems and Participatory GIS

The main regional foci are Latin America, Western Europe, the Pacific Rim, Mexico-U.S. borderlands, Sub Saharan Africa, and semi-arid lands. Further information on systematic areas, techniques and regional foci, as well as general program information can be obtained through the Department of Geography's Web site at http://geography.sdsu.edu

The master's degree programs are designed to provide advanced training for a) students who plan to terminate their graduate studies at the master's level, and b) those who anticipate additional work leading to the doctoral degree in geography or related fields.

The Master of Arts degree program is designed around one of the systematic areas previously listed in Group A and will generally also include coursework in one of or more technical skills in Group B. The Master of Science program has two concentrations (1) geographic information science, and (2) watershed science.

The Doctor of Philosophy program, offered jointly with the University of California, Santa Barbara, provides advanced training for research and teaching at the highest academic level.

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

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.
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.
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. The student must meet the requirements in both
Groups A and B. At least two courses must be taken in each group.

Applicants for admission to the doctoral program in geography
offered jointly by SDSU and UCSB are considered after the student has
met the 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 of SDSU and UCSB. Applications for outstanding students in other majors
are encouraged, but such students should expect to take additional
graduate courses during their first year to improve their background.

Admission to the Degree Curriculum

Applicants for admission to the doctoral program in geography
offered jointly by SDSU and UCSB must meet the requirements for admissions
for both the Ph.D. program and the Ph.D. in Geography, subject to the
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 for outstanding students in other majors are
encouraged, but such students should expect to take additional
courses during their first year to improve their background. All
students entering the program should have completed a lower and
upper division statistics course and the appropriate mathematics and
computer science courses for the specialty chosen.

Application. Deadline is February 1 for the upcoming fall
semester. Applicants are generally not admitted for the spring
semester. Review procedures begin early February with admission
notification beginning mid-March.

Applications must be received by the Department of Geography
not later than February 1 for the Ph.D. program.

A high undergraduate grade point average, normally 3.25 or
higher for the last 60 units taken (90 quarter units), and/or a graduate
grade point average of 3.50 or higher are required for admission. A
minimum combined score of 1100 on the GRE is expected. Scores on
both the verbal and quantitative sections of the GRE should exceed the
50th percentile.

Satisfaction of the minimum requirements at San Diego State
University or the Department of Geography does not guarantee
admission to the doctoral program.

Specific Requirements
Residency Requirements. After formal admission to the joint
doctoral program, the student must spend at least one academic year
in full-time residence on each of the two campuses. The definition of
residency is 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 the common 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 spe-
cialist’s competence in their own sub-field. In addition, all doctoral
students must have computation skills and knowledge of spatial
analysis.

Qualifying Examinations

Joint Doctoral Committee. When a doctoral student makes a
definitive selection of the systematic area and technique emphasis as
well as the general topic of their dissertation research, she/he will
select a dissertation supervisor (major professor), who can be from
either department but who normally will be a member of the SDSU
faculty, and the members of his/her joint doctoral committee. The joint
doctoral committee shall be composed of at least four members (with
the rank of Assistant Professor or above), two from the SDSU
department and two from the UCSB department. The committee may
be augmented as needed by an additional member from outside
geography at UCSB or a member of the faculty at SDSU from outside of
geography or, when authorized, another university. Chaired by the
student’s major professor, the joint doctoral committee shall be
responsible for evaluating the dissertation proposal, administering and
assisting the written qualifying examination, judging the dissertation,
and administering and evaluating the dissertation defense.

Qualifying Examinations. The process of qualifying to write a
Ph.D. dissertation has three steps. First, the student must take a
written qualifying examination that normally consists of three portions
devoted to: 1) the student’s substantive area, 2) her or his technical or
methodological field(s) of interest, and 3) general geographic thought
and inquiry. Second, the student prepares a dissertation proposal that
describes the dissertation topic, summarizes the relevant background
literature, and presents a comprehensive research plan for the disser-
tation. Third, the student’s doctoral committee will conduct an oral
qualifying examination to ensure that the student possesses the full
knowledge and competence required to carry out her or his disserta-
tion 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 adminis-
tered 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 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)
Prerequisites: Geography 370 and 375.
Occurrence and utilization of water sources and the problems of water resource development. Field trips may be arranged.

GEOG 575. Geography of Recreational Land Use (3)
Prerequisite: Geography 101 or 102.
Importance of location and environment in the use, management, and quality of recreation areas. Field trips are required.

GEOG 581. Cartographic Design (3)
Two lectures and three hours of laboratory.
Prerequisite: Geography 381.
Computer-assisted map production techniques with emphasis on map design and color use.

GEOG 583. Internet Mapping and Distributed GIS Services (3)
Two lectures and three hours of laboratory.
Prerequisite: Geography 381 or 484.
Current development of Internet mapping and cartographic skills for web-based maps (multimedia, animation, and interactive design). Fundamental theories of distributed GIS to support Internet mapping with focus on distributed component technologies, Internet map servers, and web services.

GEOG 584. Geographic Information Systems Applications (3)
Two lectures and three hours of laboratory.
Prerequisite: Geography 484.
Spatial analysis methods in GIS, to include terrain, raster, and network analysis. Feature distributions and patterns. GIS data processing techniques to include spatial interpolation, geocoding, and dynamic segmentation. Designing and executing analytical procedures.

GEOG 585. Quantitative Methods in Geographic Research (3)
Prerequisite: Geography 385.
Application of statistical techniques to geographic research to include simple regression and correlation, multiple regression, geographically weighted regression, classification, factor analysis, and computer applications.

GEOG 586. Qualitative Methods in Geographic Research (3)
Prerequisite: Geography 102.
Application of qualitative techniques to geographic research including reflexive survey design and in-depth interviews, non-observative methods, landscape interpretation, textual methods and discourse analysis, feminist criticism, and humanistic and historical materialist perspectives on measurement.

GEOG 587. Remote Sensing of Environment (4)
Three lectures and three hours of laboratory.
Prerequisite: Geography 101. Recommended: Physics 180A-180B.
Techniques for acquiring and interpreting remotely sensed data of environment. Electromagnetic radiation processes, aerial photographic systems, and human interpretation of aerial and satellite imagery. Geographic analysis of selected terrestrial, oceanographic, and atmospheric processes and resources.

GEOG 588. Intermediate Remote Sensing of Environment (4)
Three lectures and three hours of laboratory.
Prerequisites: Geography 385 and 587.
Multispectral remote sensor systems and interpretation of imagery from nonphotographic systems. Computer-assisted image processing. Geographic analysis of selected terrestrial, oceanographic, and atmospheric processes.

GEOG 589. GIS-Based Decision Support Methods (3)
Prerequisite: Geography 484.
Integration of Geographic Information Systems (GIS) with decision support techniques for problem-solving and decision-making. Public participation and collaborative use of GIS for location-based planning and resource management.
GEOG 595. Geographic Internship (3)  
Prerequisites: Six upper division units in geography and consent of instructor.  
Students will be assigned to various government agencies and industry and will work under the joint supervision of agency heads and the course instructor.

GEOG 596. Advanced Topics in Geography (1-3)  
Prerequisite: Six upper division units in geography.  
Advanced special topics in geography. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

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)  
Prerequisite: Concurrent registration in Geography 683.  
Three to six hours of laboratory.  
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)  
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 799A. Thesis (3) Cr/NC/RP  
Preparation of a project or thesis for the master’s degree.  
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 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. Maximum credit nine units.

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.
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 architectural and English translations with an English translation of the transcripts for work completed since last attendance.

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

The following materials should be mailed or delivered to:

Department of Geological Sciences
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1020

(1) Department application available at:
http://www.geology.sdsu.edu/gradprogram/applicants.htm;

(2) Two letters of reference.

All student applications are evaluated competitively and no fixed numerical standards automatically qualify or disqualify a student for graduate study in the Department of Geological Sciences. Students will be admitted on the basis of merit in relation to space and faculty availability.

Geological Sciences

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as stated in Part Four of this bulletin.

Specific Requirements for the Master of Science Degree

(Major Code: 19141) (SIMS Code: 775301)

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master’s degree as described in Part Four of this bulletin, and a graduate program consisting of 30 units of upper division and graduate courses selected from the geological sciences and closely related fields. This program must be approved by the graduate adviser.

A minimum of 18 units must be selected from 600- and 700-numbered courses in the Department of Geological Sciences. Graduate students are required to complete three units of Geological Sciences 797 Research and three units of Geological Sciences 799A Thesis (Plan A) or three units of Geological Sciences 750, Research and Technical Writing (Plan B). Both Plan A and Plan B students are required to pass a final oral examination. With approval of the graduate adviser, students may include 12 units of approved upper division and graduate electives from acceptable courses offered in other related areas. No more than six units of the upper division electives may be Department of Geological Sciences courses.

Section II.
Doctoral Program

http://geology.sdsu.edu

Geophysics

(Major Code: 19160) (SIMS Code: 775370)

General Information

The cooperating faculties of the Department of Geological Sciences at San Diego State University and the Geophysics Curricular Program of the Scripps Institution of Oceanography Graduate Department at the University of California, San Diego offer a joint doctoral program in geophysics. The complementary specialties of the two groups result in two focus areas: earthquake science and 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.cssenrollment.edu. Application deadlines and contact information for the joint doctoral program coordinator are available at http://geology.sdsu.edu.

In addition, all applicants must submit the following admissions materials separately to SDSU Graduate Admissions and to the Department of Geological Sciences, San Diego State University.

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

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

(1) Official transcripts (in sealed envelopes or mailed directly from the issuing institution) from all postsecondary institutions attended (students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation).

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

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

B. The following materials should be mailed as a complete package to:

Department of Geological Sciences
(Attention: Joint Doctoral Program Coordinator)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1020

(1) Three letters of recommendation (in sealed and signed envelopes);

(2) Curriculum vitae or resume;

(3) Applicant’s statement of purpose in seeking the Ph.D.

A scholastic average of B (3.0 /4.0) or better in upper-division courses, or prior graduate study, is required. Special consideration occasionally can be given to candidates with outstanding records who do not meet all preadmission criteria, but such students should expect to take additional courses to improve their backgrounds.

Satisfaction of the minimum requirements at San Diego State University or the Department of Geological Sciences does not guarantee admission to the doctoral program.

Specific Requirements for Doctoral Program

Residency Requirements

After formal admission to the joint doctoral program, the student must spend at least one academic year in full-time residence on each of the two campuses. The definition of residence must be in accord with the regulations of UCSD and SDSU. Usually, the first year is spent at UCSD; the second and subsequent years at SDSU.

Advising Committee

Upon admission to the program, the joint doctoral graduate advisers of the two institutions will establish an advising committee for each student. The committee will consist of four faculty members, normally two from each campus. In consultation with the student, the committee will develop a course of study, including identifying
academic deficiencies and recommending remedies for them. The
advising committee will be the official advising group for the student
until a joint doctoral committee has been chosen and recommended
to the Graduate Divisions by the advising committee.

Language Requirement
There is no specific foreign language requirement for this program,
but knowledge of a foreign language may be deemed necessary by
the advising committee to successfully pursue the student's research
goal. All students must be proficient in English.

Course Requirements
There is no single course of study appropriate to the geophysics
doctoral program. Instead, the individual interests of the student will
permit, in consultation with the advising committee, a choice of course
work in earthquake science or applied geophysics, although certain
core courses are usually taken during most of the first year. In the
summer or early fall following the first year of study each student will
take the departmental examination which is both written and oral. The
foundation for this examination is laid by the core courses.

Departmental Examination
Doctoral candidates normally will be required to take a departmen-
tal 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, com-
prehension of required subject material and of the pertinent
interactions. Part of the examination is based on the knowledge of a
number of assigned journal articles. The oral examination includes a
discussion of the student's research progress.

Qualifying Examinations

Joint Doctoral Committee
After the student has passed the departmental examination, a joint
doctoral committee will be appointed. The joint doctoral committee
must be formed before the student may proceed to the qualifying
examination. The student will select a dissertation supervisor (major
professor), who will chair the joint doctoral committee. The joint
doctoral committee shall be composed of at least four members of the
joint doctoral program faculty, two from the SDSU department and two
from the UCSD department. The committee may be augmented as
needed by an additional member from outside geophysics at UCSD or
a member of the faculty at SDSU from outside of geophysics or, when
authorized, another university. The joint doctoral committee shall be
responsible for evaluating the dissertation proposal, administering
and evaluating the qualifying examination, judging the dissertation,
and administering and evaluating the dissertation defense.

Qualifying Examination
The joint doctoral committee will determine the student's qualifica-
tions 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 fea-
sibility, 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
the 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 dis-
sertation 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
commitees.

San Diego State University:
Committee Members: Day, Ma, Olsen, Rockwell.

University of California, San Diego:
Committee Members: Agnew, Stock, Constable, Dorman, Fialko,
Harding, Minster, Sandwell, Shearer, Vernon.

Courses Acceptable on Master's and
Doctoral Degree Programs in Geological
Sciences (GEOL)
Refer to Courses and Curricula and Regulations of the Division of 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

GEOL 508. Advanced Field Geology (4 or 6)
One lecture and three hours of laboratory plus 28 days in the field.

Prerequisite: Geological Sciences 306

Investigation of individually assigned areas, preparation of geo-
logic 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 geological problems.

GEOL 533. Geophysical Analysis (3)
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 205 and either Biology 100-100L, 101-101L, or 203-203L. 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. Principles of paleontology, including ecology and evolution. Tools of paleontology, including biomechanics, shape analysis, phylogeny, population analysis, study of biogeographic, temporal, and environmental distribution. Focus on using biology to solve geologic problems and vice versa.

GEOL 545. Descriptive Physical Oceanography (3)
Prerequisites: Mathematics 121 and 122, or 150; Physics 180A or 195. Physical environment of oceans including heat, water, and salt budgets, physical properties of sea water, sea ice, air-sea relationships, effects of light and sound, distribution of temperature, salinity, density, surface current, deep circulation, water mass formation, instruments and methods of study.

GEOL 550. Engineering Geology (3)
Two lectures and three hours of laboratory.
Prerequisite: Geological Sciences 306. Relationships between geologic processes and works of humans. Topics include rock and soil mechanics, ground water flow, slope stability, seismicity, land subsidence, and evaluation of geologic materials with respect to dam sites, tunnel alignments, and building foundations.

GEOL 551. Hydrogeology (3)
Two lectures and three hours of laboratory.

GEOL 560. Earthquake Seismology (3)
Two lectures and three hours of laboratory.

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 596, 496, 598 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES

GEOL 600. Seminar (1-3)
Refer to Class Schedule for lecture/laboratory format. Prerequisite: Consent of instructor. An intensive study in advanced geology. May be repeated with new content. Topic to be announced in the Class Schedule. Maximum credit six units applicable to a master's degree.

GEOL 622. Seminar: Sedimentary Basin Analysis (3)
Prerequisite: Geological Sciences 356. 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. Paleoclimatology (3)
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 537 and Biology 354. Problems and methods in the study of relationships between fossil organisms and their environment: interpretation of paleoenvironment, paleoclimates, and biologic relationships among fossil organisms.

GEOL 630. Selected Topics in Geophysics (3)
Prerequisite: Consent of instructor. Research topics in seismic, gravity, magnetic, electrical, and electromagnetic methods. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

GEOL 631. Simulation of Wave Propagation in Complex Media (3)
Prerequisite: Mathematics 342B or similar level of power series, partial differential equations. Symbolic operators, accuracy, consistency, and stability for finite difference equations, boundary conditions (free surface/periodic/absorbing) and seismic sources (earthquake/explosive). 1D, 2D, and 3D approximations to the wave equation will be derived.

GEOL 632. Geophysical Inverse Theory (3)
Prerequisite: Mathematics 342A or similar level of matrix/linear algebra. Linear (SVD and gradient methods) and nonlinear (random and guided search) methods for inversion, including solution appraisal. Inversion methods applied to geophysical problems. Introduction to Matlab/Unix/Fortran.

GEOL 633. Quaternary Geology (3)
Two lectures and three hours of laboratory.
Prerequisite: Geological Sciences 514. Quaternary climate, geochronometric dating and soil stratigraphy.

GEOL 634. Geoelectromagnetics (3)
Prerequisite: Geological Sciences 533. Recommended: Electrical Engineering 340 or Physics 400A-400B. Controlled-source electromagnetics, magnetotellurics, and ground-penetrating radar to near-surface environmental, engineering, and buried metal (pipes and military ordnance) problems; extension to deeper targets found in groundwater, mining, energy exploration, and geodynamics.

GEOL 635. Petrology of Terrigenous Rocks (3)
Two lectures and three hours of laboratory.
Prerequisite: Geological Sciences 336. Thin-section and hand-specimen description and classification of sandstones, conglomerates, and mudrocks. Emphasis on mineralogy, provenance, diagenesis, and paleogeographic reconstructions.

GEOL 640. Geodynamics (3)
Prerequisites: Geological Sciences 306; Physics 180B or 196. Combination of plate tectonics, structural geology, and geophysics. Topics in continental genesis and evolution, orogeny, plate tectonics theory, and a survey of classic plate boundaries.
GEOL 642. Neotectonics (3)
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 306 and 514.
Observation, interpretation and significance of late Quaternary
crustal deformation.

GEOL 645. Advanced Structural Geology (3)
Prerequisite: Geological Sciences 306.
Topics in advanced structural geology in the light of petrographic,
geophysical, and experimental data, combined with classic field
observations.

GEOL 651. Applied Groundwater Flow Modeling (3)
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 551 and experience in
computer programming.
Analytical and numerical computer modeling of unsaturated and
saturated flow. Application of MODFLOW to analyze groundwater
hydrologic scenarios.

GEOL 660. Isotope Geology (3)
Prerequisite: Geological Sciences 530.
Fundamental principles of isotope geochemistry and geochronology. Use of stable and radiogenic isotopic systems to
study the earth. Instrumental methods of isotopic analysis.

GEOL 675. Groundwater Geochemistry (3)
Prerequisites: Chemistry 201 and Mathematics 150.
Processes affecting inorganic solutes in groundwater. Applications
to groundwater geochemical evolution, weathering processes, and
inorganic contaminant transport.

GEOL 676. Aquifer Characterization and Solute Transport (3)
Prerequisite: Geological Sciences 551.
Theory and practice of aquifer characterization by hydraulic
aquifer tests and tracer tests. Modeling of advection, dispersion,
sorption, and transformation of dissolved solids.

GEOL 677. Environmental Fate of Organic Contaminants (3)
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 551 and 530, or chemistry
background.
Physical and chemical properties and processes affecting distrib-
ution of organic contaminants in the environment. Focus on
subsurface environments with applications to surface waters.

GEOL 686. Advanced Igneous Petrology (3)
Prerequisite: Geological Sciences 324.
Physical and chemical processes within earth's mantle and crust
leading to generation of igneous rocks in variable tectonomagmatic
environments. Not open to students with credit in Geological Sciences
600, Seminar: Advanced Igneous Petrology.

GEOL 687. Volcanology (3)
Prerequisite: Geological Sciences 324.
Chemical and physical properties of magma; generation, rise, and
storage of magma. Eruptive mechanisms, volcano types, and a variety
of volcanic phenomena associated with Hawaiian, Strombolian,
Plinian, volcanian, and hydrovolcanic eruptions.

GEOL 690. Earthquake Physics I (3)
Prerequisite: Geological Sciences 560. Recommended: Mathematics 342B.
Structure and theology of fault zones as inferred from geological
and geophysical observations. Stress state and frictional behavior of
faults, stress interaction models, thermal, and hydrological properties
of fault zones. Mechanics and energy budget of earthquakes.

GEOL 691. Earthquake Physics II (3)
Prerequisites: Geological Sciences 560 and 690. Recommended: Mathematics 342B.
Theoretical and numerical models of earthquake rupture and wave
propagation, with applications to ground motion prediction and
seismic hazard estimation. Collective behavior of fault networks,
seismicity models, earthquake predictability; application to earth-
quake 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
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

OFFICE: Education and Business Administration 304
TELEPHONE: 619-594-5111 / FAX: 619-594-8006
E-MAIL: german.coord@sdsu.edu
http://www-rohan.sdsu.edu/~berlin/

Chair of Department: Anne Donadey, Ph.D.

Faculty
Erich W. Skwara, Ph.D., Professor of German
Mary M. Wauchope, Ph.D., Associate Professor of German
Kristin Rebien, Ph.D., Assistant Professor of German

General Information
The Department of European Studies offers advanced coursework in German. Graduate courses in German may be used to fulfill requirements for advanced degrees in other departments with the approval of the student's graduate adviser.

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

UPPER DIVISION COURSES
NOTE: All upper division courses in German are taught in German unless otherwise stated.

GERMN 501. Translation (3)
Prerequisites: German 300 and 301.
Translation of a variety of texts from German to English and English to German.

GERMN 520. Modern German Literature (3)
Prerequisites: German 300 and 301.
Major authors and genres since Enlightenment.

GERMN 575. Seminar in German Studies (3)
Prerequisite: Two upper division German courses.
Directed research on topics in German studies. See Class Schedule for specific content. May be repeated with new title and content. Maximum credit six units.

GERMN 596. Topics in German Studies (3)
Prerequisites: German 300 and 301. Proof of completion of prerequisite required: Copy of transcript.
Topics in German language, literature, or linguistics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES

GERMN 696. Topics in German Studies (1-3)
Prerequisite: Eighteen upper division units in German.
Intensive study in specific areas of German. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GERMN 798. Special Study (1-3) Cr/NC/RP
Prerequisites: Eighteen upper division units in German and consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units applicable to a master's degree.
Gerontology
In the School of Social Work
In the College of Health and Human Services

OFFICE: Hepner Hall 203
TELEPHONE: 619-594-6765 / FAX: 619-594-2811

Faculty
Mario D. Garrett, Ph.D., Professor of Social Work
Jong Won Min, Ph.D., Associate Professor of Social Work
Eunjeong Ko, Ph.D., Assistant Professor of Social Work
Yawen Li, Ph.D., Assistant Professor of Social Work

Adjunct Faculty
Anthony D’Angelo, M.S., Gerontology
Juan Ramón Valle, Ph.D., Gerontology

Assistantships
Graduate teaching and research assistantships in gerontology are available to a limited number of qualified students. Information regarding the availability of funds and the process for application may be obtained from the School of Social Work.

General Information
The Master of Science degree in gerontology is supported by faculty from several departments. The program is administered by the School of Social Work. The program is designed to provide systematic advanced education in gerontology for those planning to enter professions related to higher education, social services, health services, government, or business. The program will provide education for those interested in the area of policy, theory and its applications, health and aging, community services, program development, and biostatistical evaluation. Students will gain a better understanding of the roles of older people and their contributions to society. The program will also prepare students for entry to doctoral level education.

Admission to Graduate Study
The student must satisfy the general requirements for admission to the university with classified standing, as described in Part Two of this bulletin. Students whose preparation is deemed insufficient by the gerontology admissions committee may be admitted as conditionally classified and will be required to complete specific courses in addition to the minimum 36 units required for the degree. Students from other disciplines are encouraged to apply. Applicants should have a minimum undergraduate grade point average of 3.0 (on a 4.0 scale) during the last 60 semester units of undergraduate college/university coursework. The grade point average must be in concurrence with Division of Graduate Affairs requirements for admission. Admission requirements are outlined in the graduate application package for an advanced degree in gerontology at San Diego State University.

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

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

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

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

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

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

School of Social Work
The following materials should be submitted by February 1 for the fall semester to:

School of Social Work
(Attention: Gerontology Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4452

(1) Three letters of reference in support of your application from academic references;
(2) Personal statement outlining your goals, background, interests, and abilities;
(3) Resume.

Advancement to Candidacy
All students must pass the general requirements for advancement to candidacy as described in Part Four of this bulletin. Advancement to candidacy is contingent upon classified graduate status, completion of 12 semester units with a minimum grade point average of 3.0, satisfactory completion of an oral examination with a minimum grade of B and approval of the Graduate Council. Advancement to candidacy will be conferred prior to graduation.

Specific Requirements for the Master of Science Degree
(Major Code: 21043) (SIMS Code: 551904)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Science degree as described in Part Four of this bulletin, the student must complete a minimum of 36 units. The program consists of 30 units of required core courses and six units of electives.

Core Curriculum Requirements. A minimum of 30 units is required in the following core courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GERO 601</td>
<td>Theory in Gerontology</td>
<td>3</td>
</tr>
<tr>
<td>GERO 602</td>
<td>Policy Development, Analysis, and Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>GERO 603</td>
<td>Healthy Aging</td>
<td>3</td>
</tr>
<tr>
<td>GERO 605</td>
<td>Long-Term Care</td>
<td>3</td>
</tr>
<tr>
<td>GERO 630</td>
<td>Research Methods and Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>GERO 700A</td>
<td>Practicum (Cr/NC)</td>
<td>3</td>
</tr>
<tr>
<td>GERO 700B</td>
<td>Practicum (Cr/NC)</td>
<td>3</td>
</tr>
<tr>
<td>GERO 797</td>
<td>Research (Cr/NO/RP)</td>
<td>3</td>
</tr>
<tr>
<td>GERO 799A</td>
<td>Thesis (Plan A) OR GERO 798 (Plan B)</td>
<td>3</td>
</tr>
<tr>
<td>P H 602</td>
<td>Biostatistics</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: 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.
Electives. A minimum of six units of electives is required. Selected with the approval of the student's adviser, electives must include courses in gerontology or departments related to gerontology. Any gerontology graduate course or 500- to 700-level courses not taken for credit in the core curriculum qualify as electives. The breadth of courses available to supplement the core of required courses will be extensive, and draw on resources from across the university.

Plan A or Plan B. Students who complete Plan A, Thesis option for the M.S. degree in gerontology must include GERO 797 and 799A (Thesis) in the 30-unit program, and are required to pass a final oral examination on the thesis. Students in Plan B (non-thesis option) must include GERO 797 and 798 in the 30-unit program, and pass a comprehensive written examination.

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.
Current state and national history, analysis, and assessment of current state and national policy, objectives, principles, and skills in service to individuals, families, groups, organizations, and communities. (Formerly numbered Gerontology 700.)

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.
History
In the College of Arts and Letters

OFFICE: Arts and Letters 588
TELEPHONE: 619-594-5262 / FAX: 619-594-2210
http://www.rohan.sdsu.edu/dept/histweb/dept.html

Faculty
Joanne M. Ferraro, Ph.D., Professor of History,
Chair of Department
Lawrence Baron, Ph.D., Professor of History, The Nasatir Professor of
Modern Jewish History (Graduate Adviser)
Elizabeth Cobbs Hoffman, Ph.D., Professor of History, The Dwight E.
Stanford Chair in American Foreign Relations
Eve Kornfeld, Ph.D., Professor of History
Mathew S. Kuebler, Ph.D., Professor of History
Andrew Wiess, 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-Tarpney, Ph.D., Associate Professor of History
Sarah S. Elkaid, Ph.D., Associate Professor of History
Thomas P. Passantini, Ph.D., Associate Professor of History
Elizabeth Ann Pollard, Ph.D., Associate Professor of History
John C. Putman, Ph.D., Associate Professor of History
Chiu-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 distin-
guished 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 Pro-
fessorship is now held by a distinguished scholar of European
intellectual history and Holocaust studies, Lawrence Baron.

Master of Arts Degree in History

Scholarships
The Kenneth and Dorothy Stott Scholarship is awarded each June
to a student who has attended San Diego State University for at least
two years and who is being graduated or who has been graduated by
San Diego State University with a major in history. The recipient must
continue work at San Diego State University, or at any other accredited
college or university, toward a higher degree or credential. The
selection is made by the Department of History with approval of the
committee on scholarships.

General Information
The Department of History offers graduate study leading to the
Master of Arts degree in history.

The Master of Arts degree is designed to provide advanced
training for (1) students who plan to terminate their graduate studies at
the master’s level, (2) those who anticipate further study leading to a
doctoral degree in history or related fields, and (3) those who plan to
teach history at the secondary or community college levels.

Research facilities include a substantial library of well over one
million titles and an impressive periodical collection. The library is the
depository for the documents of the United States and the state of
California, and receives all publications of the United Nations and the
Organization of American States. The library also houses 1,500 linear
feet of manuscript materials as well as audiotapes, films, oral histories,
and photographs of the greater San Diego area. The College of Arts
and Letters houses the Social Science Research Laboratory which
includes a well-equipped data processing center. The San Diego
Historical Society and the San Diego Public Library contain many
manuscript collections pertinent to local history. Located north of San
Diego is the National Archives and Records Administration at Laguna
Niguel.

Admission to Graduate Study
All students must satisfy the general requirements for admission to
the university with classified graduate standing, as described in Part
Two of this bulletin. As an additional requirement, the student must
have completed a bachelor’s degree with an undergraduate major in
history or have taken enough units in history and related fields to
demonstrate sufficient preparation for the program. The minimum
grad point average required for application to the M.A. program in
history is 2.85 in an acceptable earned baccalaureate degree or in the
last 60 semester (90 quarter) units attempted and 3.0 in the major (not
necessarily history), plus a satisfactory score on the GRE General Test
(minimum 500 verbal score). Applicants holding an acceptable post-
baccalaureate degree earned at an institution accredited by a
regional accrediting association also meet minimum qualifications.

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

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

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

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

(1) Official transcripts (in sealed envelopes) from all
postsecondary institutions attended;
Note:
• Students who attended SDSU need only submit 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) English language score. If medium of instruction was in a
language other than English (http://www.ets.org, SDSU
institution code 4682).
Department of History

The following materials should be mailed or delivered to:
Department of History
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-8147

(1) A statement of purpose of approximately 400 words;
(2) Two academic letters of recommendation (in sealed envelopes, signed across the seal).

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as stated in Part Four of this bulletin, as well as the specific requirements of the department. All students should consult the graduate adviser.

Specific Requirements for the Master of Arts Degree in History

(Major Code: 22051) (SIMS Code: 113301)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete a graduate program of 30 units which includes a major consisting of at least 24 units in history from courses listed below as acceptable on the master's degree programs, at least 18 units of which must be in 600- and 700-numbered courses. Students may elect either Plan A, requiring a thesis, or Plan B, requiring a comprehensive written examination in two fields of history chosen in consultation with the graduate adviser. Required courses are History 601, 665; six units selected from History 620, 630, 640, 650, or 680; History 797; and History 799A for those students electing Plan A. Students approved for Plan B shall meet the same course requirements as those enrolling in History 795 (three units) and one additional three-unit history course numbered from 620 to 680 in lieu of History 797 and 799A.

Candidates for this degree must demonstrate knowledge of a relevant foreign language. Course selection and programs must be approved by the graduate adviser prior to the student's registration.

Courses Acceptable on Master's Degree Program in History (HIST)

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

NOTE: Courses for Field (A) Thematic, Comparative, and Interdisciplinary History; or Field (B) The Ancient Through Early Modern World; or Field (C) The Modern World, are identified in the course title as (A), (B), or (C).

HIST 500. Topics in Ancient History (A) (3)
Prerequisite: Upper division or graduate standing.
Variable topics in ancient history throughout the world may include: Women in Greek and Roman societies, magic in the Greco-Roman World, Silk Roads, and pre-contact Mesoamerica. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.

HIST 501. History of Ancient Near Eastern Civilizations (B) (3)
Major civilizations of Near East from the origin of civilization to Roman Conquest, including Egyptians, Babylonians, Hebrews, and Persians. Social, political, and religious problems.

HIST 502. Ancient Greece (B) (3)
Greek history from prehistoric period through Age of Alexander the Great. Emphasis on political, social, cultural and institutional developments, and historiography. Secondary attention to military, economic, and religious topics.

HIST 503. Ancient Rome (B) (3)
Roman history from origins of Rome to fall of the Empire. Emphasis on political, social, cultural and institutional developments, and historiography. Secondary attention to military, economic, and religious topics.

HIST 504. The Early Middle Ages (B) (3)
(Same course as Humanities 504)
Europe and Mediterranean 300-1100 C.E. through various approaches: political, economic, social, cultural. Collapse of Roman Empire, transformation of classical culture and regions that claimed its heritage: especially the kingdoms of western Europe, but also Byzantine and Arab empires. (Formerly numbered History 404.)

HIST 505. The Later Middle Ages (B) (3)
Europe and the Mediterranean 1100-1450 C.E. through various approaches: political, economic, social, cultural. Development of kingdoms of western Europe and relationship to Byzantine empire and other states. (Formerly numbered History 405.)

HIST 506. The Renaissance (B) (3)
(Same course as Humanities 506)
Intellectual, artistic, social, and economic transformation in Europe from fourteenth to seventeenth centuries.

HIST 507. The Reformation (B) (3)
(Same course as Religious Studies 507)
Continental Europe, 1500-1648. Split of Christendom; political and intellectual dissent; social fabric of family life; relationship between gender, class, and power; cultural stratification of European society.

HIST 509. British Century: Waterloo to World War I (C) (3)
Prerequisite: Upper division or graduate standing.
History of England, 1815-1914; to include industrial supremacy; struggles over urban problems, reform, democratization, labor organization, national self-image; interplay of liberalism and collectivism; sources of social stability and instability; women’s rights; jingoism; coming of World War I.

HIST 512A. The Great War: A Turning Point in European History (C) (3)
Forces and events that shaped Europe in period prior to and during World War I, 1890-1919.

HIST 512B. The Age of Dictators and Contemporary Europe (C) (3)
Europe in the age of dictatorship, world war, decline, and recovery.

HIST 513. Early Scandinavia (B) (3)
The formation and development of the Scandinavian kingdoms from the Viking Age to the end of the Napoleonic Wars. (Formerly numbered History 513A.)

HIST 516. Imperialism and the Colonial Experience (A) (3)
Prerequisite: Upper division or graduate standing.
Imperialism and colonialism as these transformed both colonizing and colonized peoples, e.g., modernization, racism, Orientalism, multi-ethnic, Great Power competition, anti-colonial resistance, and nationalism.

HIST 517. Modern Germany (C) (3)
Political, social, and economic development of Germany from 1848 to present.

HIST 527. The Holocaust in Feature Films (A) (3)
(Same course as European Studies 527)
Two lectures and two hours of activity.
Prerequisite: Upper division or graduate standing.
Depiction of the Nazi policy of destroying European Jewry and its impact on the perpetrators, bystanders, victims, and the post-war world in feature films.

HIST 528. Social History of Early Modern Europe (B) (3)
Historical survey of European society emphasizing changes in the family, health, diet, standard of living, urbanism, crime, migration, and literacy, from 1350 to beginning of Industrial Revolution.

HIST 530. Colonial America (B) (3)
Settlement and development of the English colonies in North America through the mid-eighteenth century. Contact of cultures, social structure, labor systems, religion, popular values, problems of imperial control, and political culture.
HIST 532. Topics in Early American History (B) (3)
Prerequisites: Upper division or graduate standing and three units in history at the college level.
Variable topics in history of colonial America and the early republic. Possible topics include: Women and the Family; Race, Class and Labor; American Revolution; Religion and Politics; Immigrants’ Experiences. See Class Schedule for topic. May be repeated with new content. Maximum credit six units.

HIST 533. Antebellum America (C) (3)
Prerequisite: Upper division or graduate standing.
Westward expansion and movement, market revolution, democratic politics, revivalism, slavery, and women’s rights. (Formerly numbered History 533A.)

HIST 534. Civil War and Reconstruction (C) (3)
Prerequisite: Upper division or graduate standing.
Civil War and Reconstruction, emphasizing political affairs and role of Lincoln. (Formerly numbered History 533B.)

HIST 535. The Age of Roosevelt (C) (3)
The United States in Depression, War, and Cold War. (Formerly numbered History 535B.)

HIST 536. The United States Since World War II (C) (3)
Major foreign and domestic issues confronting the United States, and the government policies and popular movements generated in response.

HIST 538. American Religious History (A) (3)
Prerequisite: Upper division or graduate standing.
Religious ideas, leaders, movements, institutions, and ideologies throughout United States history. Religious change over time and connections between religion and colonialism, nationalism, politics, race, class, gender, sexuality, war, diversity, justice, and material culture.

HIST 539. Topics in the History of the American West (C) (3)
Prerequisites: Upper division or graduate standing and three units of history at the college level.
Selected topics in history of American West such as Westward movement; Southwest borderlands; gender and the frontier; new western history. May be repeated with new content. Maximum credit six units.

HIST 543. Vietnam Wars (C) (3)
Prerequisites: Upper division or graduate standing and six units in history.

HIST 544A. Early American Foreign Relations (C) (3)
Development of American foreign relations from Colonial Period to the Spanish-American-Filipino War.

HIST 544B. Modern American Foreign Relations (C) (3)
Development of American foreign relations since 1900.

HIST 545. Constitutional History of the United States (C) (3)
Development of American constitutional ideals and institutions from colonial period to the present. Examines historical context of significant legal issues and constitutional cases.

HIST 548. Race and Ethnicity in United States History (A) (3)
Prerequisite: Upper division or graduate standing.
Race and ethnicity in America from colonial period through twentieth century to include historical construction of identity; colonization, slavery, state formation; labor, immigration, politics of whiteness; applicability of black/white binary of a multi-ethnic society.

HIST 550. Colonial Mexico (B) (3)
Social history of Mexico from pre-contact through early national period using primary and secondary sources. Processes of social and cultural negotiation involving gender, religion, environment, medicine, and urban experience.

HIST 551. Modern Mexico (C) (3)
Social history of Mexico since early national period using primary and secondary sources. Processes of social and cultural negotiation involving gender, religion, environment, medicine, and urban experience.

HIST 558. Latin America in World Affairs (C) (3)
History of Latin America’s political and economic relations with Europe, the Soviet Union, the United States, and the Third World.

HIST 563. Southeast Asia to 1800 (B) (3)
Cultural traditions of Southeast Asian people. Examines nature of the state, interstate relations, evolution of indigenous institutions, and influences of India, China, Islam, and the West to end of the eighteenth century.

HIST 564. Southeast Asia in the Modern World (C) (3)
Southeast Asian history since 1800 with attention to colonialism, sociocultural change, Chinese diaspora, nationalism and independence, and economic development. Considers transnational comparisons among Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

HIST 566. Chinese Civilization: The Great Traditions (B) (3)
China’s institutional and cultural development from ancient to pre-modern times. Emphasis on traditional philosophy, religions, literature, and the arts.

HIST 567. China in Revolution (C) (3)
China’s history during the tumultuous nineteenth and twentieth centuries. China’s forced encounter with Western imperialism, rural, and urban social movements. Impact of Mao’s Revolution on everyday life in China, successes, limitations of China’s recent reform policies.

HIST 570. Japan in the Modern World (C) (3)
Japan’s emergence as a modern state since the nineteenth century, and ongoing struggle to redefine Japanese identity. Examines Japan’s engagement with modernity as seen through changes in political discourse, gender relations, international relations, intellectual trends, and economic development.

HIST 574. Arab-Israeli Relations, Past and Present (C) (3)
Arab-Israeli conflict and diplomacy over Palestine from perspectives of Zionism, Arab nationalism, and Great Power relations from nineteenth century to present.

HIST 581. Topics in Urban History (A) (3)
Prerequisite: Upper division or graduate standing.
Variable topics in urban history may include: The city in United States history, Chinatowns, suburbs and suburbanization, urban politics. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.

HIST 582. Topics in Social and Cultural History (A) (3)
Prerequisite: Upper division or graduate standing.
Variable topics in social and cultural history may include: Ritual in early modern Europe, radicals and revolutionaries, intellectuals and society, families in former times, and American popular culture. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.

HIST 583. Topics in History of Gender and Sexuality (A) (3)
Prerequisite: Upper division or graduate standing.
Variable topics in history of gender and sexuality may include: Gay and Lesbian history, Asian American gender and sexuality, genders in Latin America. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.

HIST 584. Topics in Environmental History (A) (3)
Prerequisite: Upper division or graduate standing.
Variable topics in environmental history may include: Press, politics, environment, world environmental history, water and society. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.
**History**

**HIST 585. History of the Sixties (C) (3)**  
Prerequisite: Upper division or graduate standing.  
Variable topics in the history of the 1960s may include: America in the 1960s, Africa in the 1960s, politics and protests in the 1960s, Europe in the 1960s. See Class Schedule for specific topics. May be repeated with new content. Maximum credit six units.

**HIST 596. Selected Studies in History (A) (B) (C) (1-4)**  
Topics in various fields of history, such as biography, war, science, technology, urbanization, minority groups, immigration, and capitalism. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

**GRADUATE COURSES**

**NOTE:** All graduate courses in the Department of History have a prerequisite of 12 units of upper division courses in history, or consent of the instructor.

**HIST 601. Seminar in Historical Methods (3)**  
Historical methodologies, historiography, and critical analysis.

**HIST 620. Directed Readings in European History (3)**  
Prerequisite: Consent of instructor.  
Selected readings in historical literature and primary sources in a designated area of European history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

**HIST 630. Directed Readings in United States History (3)**  
Prerequisite: Consent of instructor.  
Selected readings in historical literature and primary sources in a designated area of United States history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

**HIST 640. Directed Readings in Latin American History (3)**  
Prerequisite: Consent of instructor.  
Selected readings in historical literature and primary sources in a designated area of Latin American history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

**HIST 650. Directed Readings in Asian History (3)**  
Prerequisite: Consent of instructor.  
Selected readings in historical literature and primary sources in a designated area of Asian history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

**HIST 665. Seminar in History (3)**  
Prerequisites: History 601; six units selected from History 620, 630, 640, 650, or 680, three units of which may be taken concurrently; six additional units in history appropriate to student’s program; consent of instructor.  
Directed research on topics selected from a designated area of history. Maximum credit six units applicable to a master’s degree.

**HIST 680. Directed Reading in Selected Topics (3)**  
Prerequisite: Consent of instructor.  
Selected readings in comparative, interdisciplinary, and topical history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

**HIST 696. Special Topics in History (1-3)**  
Prerequisite: Consent of instructor.  
Intensive study in specific areas of history. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

**HIST 795. Area Studies in History (3) Cr/NC**  
Prerequisite: Advancement to candidacy.  
Preparation for the comprehensive examinations in two fields of history for those students taking the M.A. under Plan B. Maximum credit three units applicable to a master’s degree.

**HIST 797. Research (3) Cr/NC/RP**  
Prerequisites: Advancement to candidacy and written approval of the History Department graduate adviser.  
Independent research in a specialized subject in history.

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

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

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

**HIST 799C. Comprehensive Examination Extension (0) Cr/NC**  
Prerequisite: Completion or concurrent enrollment in degree program courses.  
Registration required of students whose only requirement is completion of the comprehensive examinations 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 C. 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. Omnatiowski, Ph.D., Professor of Rhetoric and Writing Studies

Patrick J. Papin, Ph.D., Professor of Physics and Associate Dean for Academic Affairs of the College of Sciences

Robert S. Pozos, Ph.D., Professor of Biology

Douglas A. Stow, Ph.D., Professor of Geography

William G. Tong, Ph.D., Distinguished Professor of Chemistry and Biochemistry

Murray Jennex, Ph.D., Associate Professor of Management Information Systems

Khaleel Mohammed, Ph.D., Associate Professor of Religious Studies

Emmanuel Rudatsikira, Dr.P.H., Associate Professor of Public Health, Director of the Global Emergency Preparedness and Response Program, Co-Director of the Institute for Public Security and Health

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

Ming-Hsiang Tsou, Ph.D., Associate Professor of Geography

General Information

The homeland security program offers interdisciplinary graduate study leading to the Master of Science degree in homeland security. The homeland security program is the first of its kind in the nation, taking advantage of the unique learning and research opportunities offered by the “living laboratory” that is the San Diego/Tijuana border region. The program provides a strong, active interdisciplinary educational environment that welcomes students with diverse professional, disciplinary, and cultural backgrounds.

The mission of the homeland security program is to produce leaders from a variety of educational and professional backgrounds who can effectively and efficiently identify, design, and mobilize the appropriate community resources to prevent, deter, preempt, defend against, and respond to terrorist attacks and/or other critical incidents and emergencies on the local, regional, national, and international levels. The active participation of graduate students and faculty with community partners is a primary focus of the homeland security program. Therefore, the program has established a number of collaborative relationships with public, private, and non-profit sector partners on the international, federal, state, and local levels. These relationships allow the homeland security graduate student to engage in a number of service-learning opportunities.

The homeland security program provides an intellectually and professionally vibrant educational environment that welcomes students with a strong desire to engage in interdisciplinary study, critical thinking, and research. Both domestic and international students are encouraged to apply.

Study Abroad and Comparative Homeland Security

The homeland security program emphasizes international and comparative approaches in the educational process. To that end, study abroad is required for all students in the homeland security program. Short-term (one to two weeks), semester, and academic year study abroad opportunities are provided in countries such as Afghanistan, Australia, Canada, China, England, France, Germany, India, Indonesia, Kazakhstan, Kyrgyzstan, Mexico, Morocco, The Netherlands, The Philippines, Poland, Russia, Spain, and Turkey.

Of particular note the homeland security program sponsors a semester study abroad program in India that allows select students to earn up to two semesters of full-time academic credit while conducting intensive research in India. The India program is not mandatory. Rather, it provides homeland security students a program-based semester-length study abroad option for meeting their study abroad requirement.

The India study-abroad program is set up for enrolled students in the homeland security program to study and conduct research in India while earning course-related credits based on a four-month course structure available during the spring and fall semesters. The study abroad program is restricted to graduate students in good academic standing at SDSU and with two faculty recommendations. Graduate students from outside of the program will be considered on a case-by-case basis.

Students are encouraged to apply for the India program after completing at least nine units of graduate study at SDSU (six of these units must come from H SEC 601, 602, 603, or 604). A maximum of two semesters or 18 units can be earned by any student in the study abroad program during a two semester (eight month) stay in India, though it is anticipated that most individual student programs of study will accommodate just one semester or nine unit courses of study.

Courses offered as part of this India program will be drawn from the homeland security course list on a semester-by-semester basis. The courses will include examinations, essays, reports, and preparation of journal papers presenting research findings and lessons learned. The courses will be taught with a focus on comparative approaches to enhance homeland security, infrastructure protection, and humanitarian assistance disaster relief for the region.

In addition to the India program, the proximity of San Diego State University to the Mexican state of Baja California Norte allows for a number of convenient study abroad experiences that are rare for many American universities. For example, one can live in San Diego and takes courses at Mexican universities that have student exchange agreements with SDSU. Students may also pursue a graduate-level certificate in Transborder Public Administration and Governance through the School of Public Affairs and/or take advantage of the homeland security program’s U.S. and Mexico-based courses on border security. Language and cultural learning opportunities are provided by SDSU’s congressionally established Language Acquisition Resource Center.

Please contact the co-directors of the homeland security program for more information on study abroad opportunities.
Admission to Graduate Study

The homeland security program accepts admission for both the fall and spring semesters. The application deadlines are posted on the Web site at http://homelandsecurityprogram.sdsu.edu or can be obtained from the homeland security program directors or graduate adviser. All students must satisfy the general requirements for admission to the university with classified graduate standing as described in Part Two of this bulletin. In addition, students must demonstrate sufficient preparation for the program. This may include a bachelor’s degree in sciences, engineering, law enforcement, international security, public policy, or a related discipline providing educational preparation for a career in homeland security. The degree must be from an accredited institution or indicate completion of equivalent academic preparation as determined by the Graduate Dean. Evaluation of a student’s transcript will be made on an individual basis by the admissions committee to determine whether evidence of sufficient preparation can be demonstrated. A student whose preparation is deemed insufficient by the admissions committee may be admitted as conditionally classified and will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

The grade-point average required for admission to the master’s program in homeland security is 2.85 in undergraduate coursework plus satisfactory scores on the verbal and quantitative sections of the GRE. An interview by the admissions committee may also be required. Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee. All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Homeland Security Program.

Graduate Admissions

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

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

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

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

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

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

Homeland Security Program

The following materials should be mailed or delivered to:

Homeland Security Program Admissions Committee
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1020

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

(2) One letter of recommendation from a person in a position to judge professional ability and potential (in sealed, signed envelope);

(3) A two-page maximum personal statement giving reasons for choosing homeland security as a degree objective;

(4) A two-page maximum personal statement summarizing applicant’s qualifications, skill sets, and life experiences as they apply to the homeland security degree.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Four of this bulletin.

Specific Requirements for the Master of Science Degree

(Major Code: 22102) (SIMS Code: 779001)

In addition to meeting the requirements for the Master of Science degree, as described in Part Four of this bulletin, students must complete 30 units of coursework in an officially approved course of study as outlined below. Students must earn a minimum grade point average of B (3.0) in the master’s program and no less than a C in each course. Students may meet the culminating experience requirement through Plan A by completing H SEC 799A or through Plan B by completing H SEC 790 and successfully passing a comprehensive examination.

Graduate Program (30 units)

I. Core Courses (12 units)

H SEC 601 Seminar in Homeland Security (3)
H SEC 602 Seminar in Science, Technology, and Homeland Security (3)
H SEC 603 Seminar in Emergency Preparedness and Response (3)
H SEC 604 Seminar in Law, Society, and Homeland Security (3)

II. Homeland Security electives: Six units in consultation with program adviser.

III. Non-Homeland Security electives: Six units in consultation with program adviser.

IV. Study Abroad (3 units). All homeland security graduate students are required to complete a homeland security-related study abroad experience. To meet this requirement, students must complete one of the following with the preapproved and written consent of the program adviser:

1. H SEC 650 Homeland Security Study Abroad (3 or 6);
2. H SEC 652 Border Security: The Case of Mexico (3);
3. A CSU Study Abroad Program;
4. An SDSU Exchange Program;
5. An SDSU Semester Abroad Program;
6. An SDSU Travel Study Program;
7. A homeland security practicum, special topics, special study, or research conducted abroad. See the program adviser to make arrangements to meet the study abroad requirement.

V. Plan A or Plan B (3 units). Students who complete Plan A, thesis or project option must include H SEC 799A in their program of study. Students who complete Plan B, non-thesis option must include H SEC 790 in their program of study and pass a comprehensive examination.

Courses Acceptable on Master’s Degree Program in Homeland Security (H SEC)

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

GRADUATE COURSES

H SEC 601. Seminar in Homeland Security (3)
Prequisite: 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.

Interruption 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.


H SEC 650. Homeland Security Study Abroad (3)
(Offered only in Extension)

Prerequisite: Classified graduate standing.

Selected topics in homeland security taught abroad. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree. Contact program adviser for more information.

H SEC 651. Border Security: The Case of the United States (3)
(Offered only in Extension)

One lecture and four hours of activity.
Prerequisites: Graduate standing and consent of instructor.

Interdisciplinary analysis of social ecology of borders and its impact on border security. Technologies used for border security. Field visits in U.S. to assess infrastructure and geography. Contact program adviser for more information.

H SEC 652. Border Security: The Case of Mexico (3)
(Offered only in Extension)

One lecture and four hours of activity.
Prerequisites: Graduate standing and consent of instructor. Valid U.S. passport, foreign travel and repatriation insurance, and approval of Office of International Programs.

Interdisciplinary analysis of social ecology of borders and its impact on border security. Technologies used for border security. Field visits in Mexico to assess infrastructure and geography. Contact program adviser for more information.

H SEC 690. Seminar (3)
Prerequisite: Classified graduate standing.

Intensive study in specific areas of homeland security on themes such as intelligence, domestic and international law and security, GIS and security, sensors and security, privacy and security. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

H SEC 695. Practicum in Homeland Security (3)
Prerequisite: Classified graduate standing.

Practical exercises related to homeland security. Cooperative exercises with first responders, homeland security officials, and/or non-governmental organizations on local, regional, national, and/or international level. Maximum credit three units applicable to a master’s degree.

H SEC 696. Special Topics in Homeland Security (1-3)
Prerequisite: Classified graduate standing.

Study in specific areas of homeland security. May be repeated with new content with the approval of graduate adviser. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

H SEC 790. Directed Readings in Homeland Security (3)
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.
Interdisciplinary Studies
Administered by the Division of Graduate Affairs

General Information
When the existing advanced degree programs of the university do not adequately meet certain special needs and interests, a student may propose a Master of Arts or Master of Science degree in Interdisciplinary Studies. This degree program provides the unusually well-qualified student an opportunity for individualized graduate study composed of coursework in at least two but not more than three departments or schools at SDSU. The Division of Graduate Affairs administers this program following procedures established by the Graduate Council.

The proposed program must not be substantially available in a current graduate program offered at the university, and it must have adequate focus and coherence in cognate disciplines. Prerequisite courses may be required to support the courses in the student’s program of study.

A graduate supervisory committee and a field of study shall be chosen, subject to the approval of the dean of the Division of Graduate Affairs. The supervisory committee shall consist of not less than three full-time faculty representatives 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. The supervisory committee shall consist of not less than three full-time faculty representatives 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.

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

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

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

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

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

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

Division of Graduate Affairs
An essay explaining the rationale for entering the Interdisciplinary Studies program as the vehicle for the master’s degree must be submitted by the deadline set by the university to:
Associate Dean
Division of Graduate Affairs
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-8020

In the essay, state concisely why you wish to pursue the interdisciplinary studies major including career objectives. Explain why existing campus programs cannot meet your academic objectives.

Advancement to Candidacy
In addition to satisfying the general requirements of the university for advancement to candidacy, as stated in Part Four of this bulletin, the student must satisfy the special requirements for advancement defined by the supervisory committee in the official program of study.

Specific Requirements for the Master’s Degree
(Major Code: 49993) (SIMS Code: M.A. 995010; M.S. 995030)

1. In addition to satisfying the requirements for classified graduate standing and the basic requirements for the master’s degree, as described in Part Four of this bulletin, the student must complete a graduate program of at least 30 units of courses acceptable for advanced degree credit.
2. The official program of study must reflect careful and deliberate planning. The selection and level of courses will be based on the best standards and practices of the disciplines involved. Normally no more than nine units taken prior to approval of the official program of study may apply to the degree.
3. In consultation with the supervisory committee, the student will determine the subject of the research for a thesis that will be completed as the culminating experience in partial fulfillment of the requirements for the degree.

General Procedures for the Program
Students must take the following steps to obtain classified student status:

1. After meeting with the assistant dean of the Division of Graduate Affairs, a student must complete and follow the instructions on the form, “Request for Permission to Pursue an Interdisciplinary Studies Master’s Degree,” which is available in the Division of Graduate Affairs. The applicant must initially seek out a potential faculty adviser and two additional faculty members who have the expertise and interest in advising and supporting the applicant in the proposed program of study.
2. When the student’s portion of the form has been completed, the major adviser selected, and other potential supervisory committee members contacted, an appointment with the assistant dean of the Division of Graduate Affairs should be arranged. In some instances, both the applicant and the proposed major adviser should be present at this meeting. Other proposed committee members are welcome to participate in these discussions.

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3. Following this meeting and after making any modifications to the proposed program eventuating from it, the student must present for approval the “Request for Permission to Pursue an Interdisciplinary Studies Master's Degree” to the chairs of departments in which courses are being proposed and to the deans of colleges responsible for these academic units.

4. The student will then present the “Request,” endorsed with appropriate departmental and college recommendations, to the Division of Graduate Affairs, where it will be reviewed by the graduate dean for final endorsement to certify that the “Request” has been approved as an official program of study, that the supervisory committee has been formally appointed, and that the student has been granted classified graduate standing for the purpose of pursuing the interdisciplinary major.

5. Virtually all other requirements for this major are the same as those for other master's degree programs, as specified in this bulletin. Special questions should be directed to the chair of the supervisory committee or to the Division of Graduate Affairs.

Courses Acceptable on Master's Degree Program in Interdisciplinary Studies (INT S)

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

GRADUATE COURSES

INT S 690. Seminar in Research Ethics (1) Cr/NC
Prerequisite: Graduate standing.
Core content areas that influence responsible conduct of research (RCR) including research misconduct, data management, use of animal and human subjects, conflict of interest and commitment, authorship, publication and peer review, and collaboration and mentoring. Intended for graduate students involved in research projects. Meets NIH and NSF training grant requirements for RCR instruction.

INT S 691. Research Ethics (2) Cr/NC
Prerequisite: Graduate standing.
Ethical dimensions of research/scholarship and resolution of ethical dilemmas. Relevant legal, institutional and professional standards and resources addressed. Distance learning and in-class methods. Meets NIH and NSF training grant requirements.

INT S 695. Seminar in Responsible Conduct of Research (RCR) (3)
Prerequisite: Graduate standing.
Practices central to scientific integrity and responsible conduct of research beyond simple compliance with rules and regulations. Emphasis is on ethical practices of science and research across disciplines.

INT S 797. Research (1-3) Cr/NC/RP
Prerequisites: Advancement to candidacy and completion of Special Study Request Form.
Independent research in a specialized subject. Maximum six units applicable to a master’s degree.

INT S 798. Special Study (1-3) Cr/NC/RP
Prerequisite: Completion of Special Study Request Form.
Independent study. Maximum credit six units applicable to a master’s degree.

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

INT S 799B. Thesis or Project Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.
Registration in any semester or term following assignment of RP in Course 799A in which the student expects to use the facilities and resources of the university; also the student must be registered in the course when the completed thesis or project is granted final approval.
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 the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.

(2) GRE scores (http://www.ets.org, SDSU institution code 4682). All applicants must post a Graduate Record Examination (GRE) verbal score of 450 or higher; a GRE quantitative score of 450 or higher; a combined GRE verbal and quantitative score of 950 or higher; and a GRE writing assessment (GRE-W) of level 4 or higher.

(3) English language score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).
For international applicants for whom English is not their first language, English language paper scores of 550 (or 213 online) or higher. Satisfaction of minimum requirements is not a guarantee of admission.
School of Journalism and Media Studies

The following materials should be mailed or delivered by February 1 to:

School of Journalism and Media Studies
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4561

(1) Three letters of recommendation from academic or professional references that speak to the student’s ability to succeed in graduate studies.

(2) A personal statement of purpose composed by the applicant that: a) describes the applicant’s undergraduate and/or professional preparation for graduate studies in the program and b) articulates the personal and/or career objectives that graduate studies in mass communication and media studies will help the applicant pursue.

Specific Requirements for the Master of Arts Degree

(Major Code: 06011)

In addition to meeting the requirements for the Master of Arts degree as described in Part Four of this bulletin, the student must complete a minimum of 30 units in courses acceptable in master’s degree programs. At least 18 units of the total program must be in courses numbered 600-799. Approval of the graduate adviser is required for all courses numbered 500-599. With the approval of the graduate adviser, students may take up to nine units of graduate coursework in departments other than the School of Journalism and Media Studies. Students may not repeat any course in their program of study without consent of the graduate adviser and instructor.

Specialization in Mass Communication and Media Studies

(Major Code: 06010) (SIMS Code: 664141)

This specialization offers advanced study for individuals seeking additional knowledge of advertising, public relations, journalistic practices, emerging communication technologies, or the impact of mass communication practices on individuals, groups, and society as a whole. The program of study is appropriate for individuals who seek a career in journalism, advertising, or public relations, who wish to pursue careers involving new media communication industries, who wish to teach at the community college level, or who wish to continue studies in 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 500. Advertising and Society (3)
Prerequisite: Admission to a major or minor in the School of Journalism and Media Studies. Proof of completion of prerequisites required: Copy of transcript.
Theoretical and philosophical analysis of advertising in modern society.

JMS 529. Investigative Journalism (3)
One lecture and four hours of activity.
Prerequisites: Journalism and Media Studies 300, 310W with grades of C (2.0) or better in each course. Proof of completion of prerequisites required: Copy of transcript.
History and role of investigative journalism in the U.S. Use of the Internet, public records, spreadsheets, and databases to develop stories in the public interest. Finding patterns and leads in electronic data. Field and laboratory experience.

JMS 550. Multimedia News Laboratory (3)
One lecture and four hours of activity.
Prerequisites: Journalism and Media Studies 300, 310W, 420 and three units selected from Journalism and Media Studies 315, 430, 445 with grades of C (2.0) or better in each course. Proof of completion of prerequisites required: Copy of transcript.
Capstone course using skills and knowledge acquired in critical thinking, writing, reporting, editing, production, and design courses. Teams prepare multimedia news content. Field and laboratory experience. Completion of course with grade of C or better is required for majors and minors.

JMS 560. Advertising Research (3)
Prerequisites: Journalism and Media Studies 310W and 460 with grades of C (2.0) or better in each course. Admission to advertising majors and minors, Major Code: 06041. Proof of completion of prerequisites required: Copy of transcript.
Systematic application of quantitative and qualitative research to planning, design, and management of advertising campaigns. Cases, practices, and problems in application of research to consumer, market analysis, positioning, creative selection, media planning, and campaign evaluation.

JMS 565. Advertising Campaigns (3)
Prerequisites: Journalism and Media Studies 461 and 560 with grades of C (2.0) or better in each course. Planning and creation of advertising campaigns. Situation analysis, strategy and objectives. Target audience analysis and selection. Creative development. Media strategy and tactics. Sales promotion. Campaign evaluation. Completion of course with grade of C or better is required for majors and minors.

JMS 574. International Advertising (3)
Prerequisite: Admission to a major or minor in the School of Journalism and Media Studies.
Comparative cultural, economic, legal, political, and social conditions relevant to international advertising.

JMS 581. Public Relations Research Methods (3)
Two lectures and two hours of activity.
Prerequisites: Journalism and Media Studies 310W and 480 with grades of C (2.0) or better in each course. Admission to Public Relations majors and minors, Major Code: 05992. Proof of completion of prerequisites required: Copy of transcript.
Qualitative and quantitative methods used in evaluation research to plan, track, and evaluate public relations programs. Computerized statistical analysis.
JMS 585. Professional Practices in Public Relations (3)
Prerequisites: Journalism and Media Studies 481 and 581 with grades of C (2.0) or better in each course.
Cases in public relations management. Theory and practice of issues management. Integration of public relations function in strategic management of corporate, governmental, nonprofit, social, and cultural organizations. Completion of course with grade of C or better is required for majors and minors.

JMS 589. Ethical Issues in Mediated Communication (3)
Prerequisites: Upper division standing or graduate standing. Admission to a major or minor for undergraduates in the School of Journalism and Media Studies. Proof of completion of prerequisites required: Copy of transcript.
Ethical challenges faced by journalists, public relations and advertising professionals, and other communication specialists. Classical and modern ethical concepts and issues as they apply to mediated communication, as well as codes of ethics.

JMS 591. International Telecommunications (3)
Prerequisite: Admission to a major or minor in the School of Journalism and Media Studies. Proof of completion of prerequisite required: Copy of transcript.
Comparative study of economic, social, political determinants of broadcasting, and telecommunication systems around the world.

JMS 595. Seminar in Theoretical Approaches to Public Relations (3)
Prerequisite: Journalism and Media Studies 585 with grade of C (2.0) or better.
Diverse theoretical approaches to public relations, including management, rhetorical, critical, relational and marketing approaches. Preparation for independent scholarly research project or master’s thesis.

JMS 596. Selected Topics (1-3)
Prerequisite: Senior standing or above.
Specialized study in selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

JMS 600A. Seminar: Introduction to Graduate Studies in Mass Communication and Media Studies (3)
Prerequisite: Classified or conditionally classified graduate standing in the School of Journalism and Media Studies.
Contemporary and emergent mass communication theory. Extensive writing from exercises in bibliographical techniques, database searches, reference works, scholarly journals, and research proposal. Required for first semester of graduate work; prerequisite for advancement to candidacy. May not be repeated more than once.

JMS 600B. Seminar: Research Methods in Mass Communication and Media Studies (3)
Prerequisite: Classified or conditionally classified graduate standing in the School of Journalism and Media Studies.
Methods and tools of inquiry in mass communication research. Survey, experimental, content analysis, legal, and historical research methods. Required for first semester of graduate work; prerequisite for advancement to candidacy. May not be repeated more than once.

JMS 602. Seminar: Military Public Affairs (3)
Prerequisites: Admission to M.A. program in the School of Journalism and Media Studies and consent of instructor.
Public relations applied to military public affairs. Public relations theory, history, ethics, social responsibility, management, law and technology. Current problems and issues in military public affairs.

JMS 603. Seminar: Professional Development in Military Public Affairs (3)
Prerequisites: Admission to M.A. program in the School of Journalism and Media Studies and consent of instructor.
Development of professional expertise in preparing research findings for external review, using methods that include statistical data analysis. Prepare for professional examination in public relations.

JMS 620. Seminar: Quantitative Methods in Media Research (3)
Prerequisites: Journalism and Media Studies 600A and 600B or Communication 601.
Research, design, computer statistical analysis, and reporting of survey, content analysis, and experimental studies in media contexts.

JMS 696. Special Topics (1-3)
Prerequisites: Journalism and Media Studies 600A and 600B.
Intensive study in specific areas of journalism and media studies. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

JMS 701. Seminar: Mass Communication Problems (3)
Prerequisites: Journalism and Media Studies 600A and 600B.
Reading, investigation, and research concerning current topics in problems of mass media. May be repeated with new content. Maximum credit six units.

JMS 708. Seminar: Mass Communication and Society (3)
Prerequisites: Journalism and Media Studies 600A and 600B.
Rights, responsibilities, and characteristics of mass media and mass communication practitioners. Characteristics and responsibilities of audiences and society.

JMS 710. Seminar: Media and Social Influence (3)
Prerequisites: Journalism and Media Studies 600A and 600B.
Role of media in social influence processes. Media strategies for use in social marketing and political campaigns.

JMS 750. Seminar: History of Media and Communication Study (3)
Prerequisites: Journalism and Media Studies 600A and 600B.
History of key concepts and figures in media and communication studies.

JMS 764. Seminar: Telecommunication Technology and Policy (3)
Prerequisites: Journalism and Media Studies 600A and 600B.

JMS 775. Seminar: Mediated Communication in International Settings (3)
Prerequisites: Journalism and Media Studies 600A and 600B.
Cultural differences and role culture plays in construction and interpretation of mediated communication in international contexts.

JMS 780. Seminar: Public Relations Research (3)
Prerequisites: Journalism and Media Studies 600A and 600B.
Analysis and critique of contemporary public relations programs and theory. Development of a comprehensive public relations project involving original research.

JMS 785. Seminar: Advertising Research (3)
Prerequisites: Journalism and Media Studies 600A and 600B.
Advanced topics in theory, design, and utilization of advertising research.

JMS 789. 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.
Kinesiology
In the School of Exercise and Nutritional Sciences
In the College of Professional Studies and Fine Arts

OFFICE: Exercise and Nutritional Sciences 351
TELEPHONE: 619-594-5541
http://ens.sdsu.edu

Faculty
Fred W. Kolkhorst, Ph.D., Professor of Exercise and Nutritional Sciences, Director of School
David Kahan, Ph.D., Professor of Exercise and Nutritional Sciences
Kathryn J. LaMaster, Ph.D., Professor of Exercise and Nutritional Sciences and Associate Dean of the College of Professional Studies and Fine Arts
Susan S. Levy, Ph.D., Professor of Exercise and Nutritional Sciences
Patricia Patterson, Ph.D., Professor of Exercise and Nutritional Sciences
Roger Simmons, Ph.D., Professor of Exercise and Nutritional Sciences
Larry S. Verity, Ph.D., Professor of Exercise and Nutritional Sciences (Graduate Adviser)
Simon J. Marshall, Ph.D., Associate Professor of Exercise and Nutritional Sciences
Denise A. Wiksten, Ph.D., Associate Professor of Exercise and Nutritional Sciences

Associateships and Assistantships
Graduate teaching associateships are available for a limited number of qualified students. These provide essential education, technical training, and creative experience necessary for future professional and scholarly activity or college-level teaching. Graduate assistantships are also available in some cases to aid faculty research. Application blanks and additional information on graduate programs may be obtained from the School of Exercise and Nutritional Sciences Web site at http://ens.sdsu.edu.

General Information
The School of Exercise and Nutritional Sciences offers graduate study leading to the Master of Arts degree in kinesiology. The Master of Arts degree permits the selection, under advisement, of a program of study which may be oriented either towards a generalist approach or with a specialization in one of two areas. This program is appropriate for individuals who require a broad theoretical foundation that might be applied to teaching, coaching, and administration in fields that involve the acquisition of gross motor skills and the enhancement of physical activity and/or fitness. The generalist program allows students to combine courses that best fit their interests. The two areas of specialization offered by the school are Specialization in Exercise and Sport Psychology and Specialization in Rehabilitation Science. Each has a strong theoretical component that provides a basis for students who seek employment in the academic, public, or private sectors, or who intend to pursue a doctoral degree within the area of specialization.

The faculty includes researchers who are professionally active in each of the areas of specialization. The school also has several clinical facilities that provide the opportunity for students and faculty to work with students, patients and subjects. In addition, facilities for biomechanics, motor control, teaching and coaching, and kinaesthesia are available for teaching and for student and faculty research. A variety of other health and education-related projects are routinely conducted in conjunction with local educational and medical institutions.

Master of Arts Degree in Kinesiology

Admission to Graduate Study
Students will be admitted to the graduate program in kinesiology only after careful consideration of their qualifications by the kinesiology graduate adviser.

Students will be admitted in fall semester, only. Submit applications no later than February 1 for the fall semester. All students must satisfy the general requirements for admission to the university with classified graduate standing as described in Part Two of this bulletin. In addition, a student applying for admission to the graduate program in kinesiology must meet the following requirements:

1. A bachelor's degree in kinesiology. Applicants who do not have an undergraduate major in kinesiology may be admitted to conditionally classified graduate standing on the recommendation of the graduate adviser of the school. They will be required to complete the minimum requirements for an undergraduate major in physical education (i.e. up to 18 units of upper division exercise and nutritional sciences coursework) in addition to the minimum of 30 units required for the master's degree.

2. A grade point average of not less than 3.0 in the last 60 units attempted.

3. A minimum score of 475 on each of the verbal and quantitative sections of the Graduate Record Examination (General Aptitude Test). Students applying for admission should electronically submit the university application available at http://www.csumentor.edu, along with the $55 application fee.

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

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

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

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

Note:
- Students who attended SDSU need only submit transcripts for work completed since last attendance.

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

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

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

The following materials should be submitted by October 1 for admission for the spring semester and February 1 for the fall semester to:
School of Exercise and Nutritional Sciences
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7251

(1) Two letters of recommendation;
(2) Statement of purpose (1-2 pages describing applicant's background, research interests/experiences, and goals).

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Four of this bulletin.

Specific Requirements for the Master of Arts Degree

(Major Code: 08351) (SIMS Code: 666535)

In addition to meeting the requirements for classified graduate standing the student must satisfy the basic requirements for the master's degree, described in Part Four of this bulletin. The 30-unit program includes a minimum of 21 units in exercise and nutritional sciences selected from courses listed in this bulletin as acceptable on master's degree programs, of which at least 18 units must be in 600- and 700-numbered courses. Exercise and Nutritional Sciences 601, 602, and 684 are required for all students seeking a Master of Arts degree in kinesiology. Also, students can complete their degree by choosing either Plan A or Plan B. If students select Plan A, Exercise and Nutritional Sciences 799A (thesis) is required for completion of their degree, accompanied by a final oral examination on the field of the thesis/project and on the implications of the thesis research for the broader field of kinesiology. If students select Plan B, Exercise and Nutritional Sciences 790 (Directed Readings) is required for completion of the degree.

Students seeking a Master of Arts degree in kinesiology are required to develop a formal plan of study that must be approved by the graduate adviser before being forwarded to the Division of Graduate Affairs.

The generalist program allows students to combine courses that best fit their interests. The school graduate coordinator counsels students in the general degree program before suggesting a program adviser. Students are required to take mandated core courses and select a number of electives. The offerings in a specialization allow a student to identify certain curricula and competencies that have been achieved once the degree has been completed.

The school expects a student to complete the degree within seven years. Failure to complete the degree requirements within seven years will result in dismissal from the program.

Specialization in Exercise and Sport Psychology

(SIMS Code: 666581)

Students take coursework that develops a knowledge base for the application of psychology in exercise and sports settings. Students with previous experience in coaching, health or fitness settings, or psychology will find the program of particular interest. (NOTE: Only fall semester admissions are accepted with a February 1 deadline.)

Required courses (12 units):
ENS 671 Seminar in Advanced Sport and Exercise Psychology (3)
ENS 687 Exercise Psychology: From Theory to Practice (3)
ENS 689 Applied Psychology for Superior Performance (3)
ENS 793 Sport Psychology and Pedagogy Internship (1-3) Cr/NC

Electives: Six units to be chosen in consultation with a specialization adviser.

Specialization in Rehabilitation Science

(SIMS Code: 666542)

Application of principles of biomechanics, motor control, and athletic training to science of physical rehabilitation. Emphasis is placed on techniques of data acquisition and analysis to assess and evaluate motor performance of clinical and non-clinical populations.

Required courses (18 units):
ENS 500 Seminar in 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 365, 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 biomechanical paradigms examined. Ethical consideration of human research.

Formerly numbered Exercise and Nutritional Sciences 630.)
ENS 611. Biomechanics: Measurement Techniques II—Kinetics (3)
Prerequisites: Exercise and Nutritional Sciences 306 and 603.
Kinetic analysis of human movement using clinical tools and laboratory devices to measure loads and forces applied to body under typical and pathological conditions. (Formerly numbered Exercise and Nutritional Sciences 631.)

ENS 612. Biomechanics: Measurement Techniques III—EMG (3)
Prerequisites: Exercise and Nutritional Sciences 306 and 603.
Tissue structure, neurological function, and muscular performance of typical and pathological human movement. (Formerly numbered Exercise and Nutritional Sciences 660.)

ENS 613. Motor Control and Rehabilitation Science (3)
Prerequisites: Exercise and Nutritional Sciences 307 and 603.
Human movement in clinical and non-clinical populations using principles of motor control. (Formerly numbered Exercise and Nutritional Sciences 673.)

ENS 671. Seminar in Advanced Sport and Exercise Psychology (3)
Prerequisite: Exercise and Nutritional Sciences 461.
Research and theory of psychological behavior in sport and physical activity. Theoretical models, research issues, and applications.

ENS 684. Behavior Change in Sport and Exercise (3)
Prerequisite: Exercise and Nutritional Sciences 307.
Principles and applications of operant psychology to the development and maintenance of behavior in physical education and sport environments. Behavioral techniques to manage and motivate learners in diverse physical activity settings.

ENS 687. Exercise Psychology: From Theory to Practice (3)
Prerequisite: Exercise and Nutritional Sciences 461.
Psychological concepts, principles and theories for understanding determinants and consequences of exercise and physical activity. Emphasis on application concepts in exercise settings. Evaluation of interventions to increase physical activity in different settings.

ENS 689. Applied Psychology for Superior Performance (3)
Prerequisite: Exercise and Nutritional Sciences 671.
Psychological factors for preparing superior athletes to compete, with particular emphasis on the day of competition.

ENS 696. Advanced Topics in Exercise and Nutritional Sciences (3)
Intensive study in specific areas of exercise and nutritional sciences. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

ENS 790. Seminar in Directed Readings (3) Cr/NC
Prerequisites: Exercise and Nutritional Sciences 602 and advancement to candidacy.
Preparation for comprehensive examination for students pursuing either an M.A. or an M.S. degree under Plan B.

ENS 793. Sport Psychology and Pedagogy Internship (1-3) Cr/NC
Three hours of supervision per unit.
Prerequisites: Exercise and Nutritional Sciences 684, 689, and consent of instructor.
Supervised field work involving assessment and evaluation of psychological and pedagogical variables in sport, physical education, fitness, and health settings. Maximum credit six units, three units applicable to a master’s degree.

ENS 798. Special Study (1-3) Cr/NC/RP
Prerequisite: Consent of department chair.
Individual study. Maximum credit six units applicable to a master’s degree.

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

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

ENS 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program courses.
Registration required of students whose only requirement is completion of the comprehensive examination for the master’s degree. Registration in 799C limited to two semesters.
Latin American Studies
In the College of Arts and Letters

OFFICE: Arts and Letters 377
TELEPHONE: 619-594-1104
http://latinamericanstudies.sdsu.edu/

Faculty Committee for Latin American Studies
Ramona L. Pérez, Ph.D., Associate Professor of Anthropology, Chair of Committee and Director of the Center for Latin American Studies (Graduate Coordinator)
Catalina Amuedo-Dorantes, Ph.D., Professor of Economics
Claudia V. Angelelli, Ph.D., Professor of Spanish
Joseph W. Ball, Ph.D., Distinguished Professor of Anthropology
Alda Blanco, Ph.D., Professor of Portuguese
David V. Carruthers, Ph.D., Professor of Political Science (Undergraduate Adviser)
James B. Gerber, Ph.D., Professor of Economics (Graduate Coordinator)
Juan M. Gómez, Ph.D., Professor of Spanish
Lawrence A. Herzog, Ph.D., Professor of Public Affairs
William A. Neridco, Ph.D., Professor of English and Comparative Literature
Norma Ojeda, Ph.D., Professor of Sociology and Chicana and Chicano Studies
Gail L. Robinson, Ph.D., Professor of Spanish and Linguistics
Elisa J. Sobo, Ph.D., Professor of Anthropology
Gregory A. Talavera, M.D., Professor of Public Health
John R. Weeks, Ph.D., Distinguished Professor of Geography
Fernando Bosco, Ph.D., Associate Professor of Geography
Stephen A. Colston, Ph.D., Associate Professor of History
Adelaïda R. Del Castillo, Ph.D., Associate Professor of Chicana and Chicano Studies
Paula S. De Vos, Ph.D., Associate Professor of History
Jill Esbeneshade, Ph.D., Associate Professor of Sociology
Jonathan Graubart, Ph.D., Associate Professor of Political Science
Irene Lara, Ph.D., Associate Professor of Women’s Studies
Matthew T. Lauer, Ph.D., Associate Professor of Anthropology
Kristen Hill Maher, Ph.D., Associate Professor of Political Science
Enrico A. Marcelli, Ph.D., Associate Professor of Sociology
José Mario Martín-Flores, Ph.D., Associate Professor of Spanish
Doreen M. Mattingly, Ph.D., Associate Professor of Women's Studies
Aron T. Mayes, Ph.D., Associate Professor of Anthropology
Jeffrey S. McIllwain, Ph.D., Associate Professor of Public Affairs
Thomas P. Passananti, Ph.D., Associate Professor of History, Associate Director of the Center for Latin American Studies (Graduate Adviser)
Frederick J. Conway, Ph.D., Assistant Professor of Anthropology
Nancy Deffebach, Ph.D., Assistant Professor of Art, Design, and Art History
Liana Ewald, Ph.D., Assistant Professor of Spanish
Kathleen A. Farley, Ph.D., Assistant Professor of Geography
Victoria González-Rivera, Ph.D., Assistant Professor of Chicana and Chicano Studies
Peter P. Lindquist, Ph.D., Assistant Professor of Spanish
Katherine Elizabeth Swanson, Ph.D., Assistant Professor of Geography
Paul Ganster, Ph.D., Director, Institute for Regional Studies of the Californias

Admission to Graduate Study

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

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Center for Latin American Studies.

Graduate Admissions

The following materials should be submitted as a complete package directly to:
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 Arts Degree in Latin American Studies

The following materials should be mailed or delivered to:
Center for Latin American Studies (Graduate Coordinator)
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 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. Three letters of reference from individuals who have known the student's academic performance (one letter may be from an individual who knows the employment performance of the student).
Master of Arts Degree in Latin American Studies

Specific Requirements for the Master of Arts Degree
(Major Code: 03081) (SIMS Code: 114301)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Four of this bulletin, the student must complete at least 30 units of upper division and graduate coursework, including Latin American Studies 600 and 601, with not less than 24 units in courses of Latin American content selected from those listed below and distributed as follows:

<table>
<thead>
<tr>
<th>600- and 700-numbered Courses</th>
<th>500-, 600- and 700-numbered Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department A........................</td>
<td>6 units</td>
</tr>
<tr>
<td>Department B........................</td>
<td>3 units</td>
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<td>Department C........................</td>
<td>3 units</td>
</tr>
<tr>
<td>Total</td>
<td>12 units</td>
</tr>
</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.

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.

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All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin. In addition, 1) the student will be required to complete Spanish 302 (or its equivalent), or Portuguese 401 (or its equivalent), and pass an oral and written examination administered by the Department of Spanish and Portuguese Languages and Literatures; 2) all core courses in business and Latin American studies must be completed prior to advancement with a minimum grade point average of 3.0 and no grade less than a B– in any core course; 3) have been recommended for advancement by the combined advisory committee; 4) have a thesis proposal approved by the combined faculty advisory committee.
Latin American Studies

Upon advancement to candidacy, the student will enroll in Management 797 (Research) and B A 799A (Thesis). A thesis (Plan A) incorporating theory, method, and analytic techniques from both disciplines is the culminating experience for the concurrent program leading to the MBA and MA degrees.

Specific Requirements for the MBA/MA Degree

(Major Code: 49061) (SIMS Code: 992001)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete an officially approved course of study consisting of 54-72 units as outlined below.

1. The college expects students entering the Master of Business Administration/MA in Latin American Studies program to be proficient in several areas. These include proficiency in statistics, mathematical skills, basic economics and in the use of personal computers, including spreadsheets and word processing. The students are responsible for insuring that they possess these skills before beginning the program.

2. Complete the following core of seven courses (21 units):
   - B A 650 Financial Reporting and Analysis I (3)
   - B A 651 Organizational Behavior (3)
   - B A 652 Statistical Analysis (3)
   - B A 653 Managerial Economics (3)
   - B A 655 Marketing (3)
   - B A 662 Operations and Supply Chain Management (3)
   - B A 665 Financial Management I (3)

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

3. Complete one course from each of the below listed themes (6 units):
   
   **Corporate Responsibility: Legal, Ethical, and Social Issues in Business Theme**
   - ACCTG 681 Seminar in Regulatory and Management Controls (3)
   - FIN 604 Legal Environment for Executives (3)
   - MGT 722 Seminar in Business Ethics and Social Institutions (3)
   - MGT 746 Seminar in Corporate Governance (3)

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

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

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

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

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

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

6. In addition, the student must complete MGT 797 (Research) and B A 799A (Thesis). The thesis in Business Administration will treat a Latin American related topic and will be supervised by a business faculty with international business expertise and at least one faculty member from the Latin American studies program. If a student after entering the concurrent MBA/MA program returns to a single degree program, all the requirements for the single degree program must be met.

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

General Information

The School of Public Affairs and the Center for Latin American Studies offer a concurrent graduate program leading to a Master of Public Administration and a Master of Arts in Latin American Studies. This concurrent degree program offers students preparation in the fields of public administration and Latin American studies for the purpose of public administration in fields requiring bi-national understanding of administration in the public sector.

If a student in the concurrent graduate program returns to a single degree program, none of the provisions of the concurrent degree program shall pertain. Transfer units will not be accepted towards the concurrent degrees, nor will previous graduate study or prior degrees be accepted toward meeting the unit requirements.

Admission to the Degree Curriculum

All students must satisfy the general requirements for admission to the university with classified graduate standing as described in Part Four of this bulletin. The successful applicant will also satisfy the requirements for both the Master of Public Administration and the Master of Arts in Latin American Studies. To be admitted to the program, students must have (1) a 3.0 grade point average in the undergraduate major and 2.85 overall and (2) an acceptable score on the Graduate Record Examination (GRE) General Test. Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee as described in Part Four of this bulletin.
Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin and be recommended by the graduate advisers of both programs. In addition, all students must (1) complete Public Administration 600 and three additional courses selected from Public Administration 604, 605 or 606, 630, 642, 650, 660; (2) complete Latin American Studies 600 and 601; (3) achieve a grade point average of 3.0 in these courses with no grade below B–; (4) satisfactorily complete Spanish 201 and 202, or Portuguese 201, or their equivalents, or pass the American Council of Teachers of Foreign Language (ACTFL) oral proficiency examination in either Spanish or Portuguese with a score of 2.0 or above; (5) demonstrate international experience in Latin America through an approved study abroad or an international internship experience, or successful completion of Latin American Studies 550, an approved study abroad experience course.

Specific Requirements for the MPA/MA Degree

(Major Code: 21020) (SIMS Code: 666905)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete an officially approved course of study consisting of 54-66 units as outlined below.

1. Complete the following core of eight courses (24 units):
   - P A 600 Scope of Public Administration (3)
   - P A 604 Methods of Analysis in Public and Urban Affairs (3)
   - P A 630 Seminar in Public Personnel Administration (3)
   - P A 642 Seminar in Administrative Theory (3)
   - P A 650 Seminar in Public Financial Management (3)
   - P A 660 Administration and Public Policy Development (3)
   - LATAM 600 Seminar in Latin American Studies (3)
   - LATAM 601 Seminar on Methodology of Latin American Studies (3)

2. Complete one of the following courses (3 units):
   - P A 605 Seminar in Research Methods in Public Administration (3)
   - P A 606 Seminar in Quantitative Approaches to Public Administration (3)

3. Complete three courses in one theme listed below (9 units):

   **City Planning Theme**
   - P A 525 The U.S. City Planning Process (3)
   - C P 630 Seminar in Urban Planning Implementation (3)
   - C P 640 Seminar in Urban Planning Theory (3)
   - C P 670 History of Urban Planning (3)
   - C P 690 Seminar in Land Use Planning Principles and Techniques (3)

   **Criminal Justice Administration Theme**
   - C J 601 Seminar in the Administration of Criminal Justice (3)
   - C J 602 Seminar in Comparative Criminal Justice System (3)
   - C J 603 Seminar in Community and Restorative Justice (3)
   - C J 604 Seminar in Criminal Justice and Urban Administration (3)
   - C J 605 Seminar in Juvenile Justice and Youth Violence (3)

   **Public Personnel and Labor Relations Theme**
   - P A 530 Negotiation and Bargaining in the Public Service (3)
   - P A 531 Governmental Employer-Employee Relations (3)
   - P A 643 Seminar in Administrative Behavior (3)
   - (Offered only at IVC)

4. Complete five courses from at least two departments (15 units):

   **Latin American Studies**
   - LATAM 510 Latin America Research Through Primary Sources (3)
   - LATAM 540 History, Society, and Ecology of Baja Peninsula (3)
   - LATAM 550 Mexican-US Border from a Latin American Perspective (3)
   - LATAM 555 Women’s Rights and Citizenship in Latin America (3)
   - LATAM 560 Latin America after World War II (3)
   - LATAM 580 Special Topics* (3)
   - LATAM 700 Current Issues in Latin American Politics (3)
   - LATAM 797 Research (3) Cr/NC/RP
   - LATAM 798 Special Study (3) Cr/NC/RP

   **Anthropology**
   - ANTH 520 Ethnographic Field Methods (3)
   - ANTH 540 Contemporary Cultures of Mesoamerica (3)
   - ANTH 582 Regional Anthropology* (3)
   - ANTH 583 Topical Anthropology* (3)
   - ECON 565 North American Economic Relations (3)
   - ECON 720 Seminar in Development and Planning* (3)
   - ECON 600-level or above; may include related elective: ECON 561 International trade (3) or ECON 592 International Monetary Theory and Policy (3)

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

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

   **Sociology**
   - SOC 522 The Family in Comparative and Cross-Cultural Perspectives (3)
   - SOC 554 United States-Mexico Transborder Populations and Globalization (3)
   - SOC 555 Immigrants and Refugees in Contemporary American Society (3)
   - SOC 740 Seminar in Social Psychology: Sociological Approaches* (3)

* Acceptable when of relevant content; check with the Latin American Studies graduate adviser before enrolling.
5. Students must complete P A 799A or LATAM 799A or P A 797 or LATAM 797 (3 units). The thesis (P A 799A or LATAM 799A) must treat a Latin American related topic in public administration and will be supervised by at least one public administration faculty and at least one member of the Latin American studies faculty. A culminating research experience (P A 797 or LATAM 797) must incorporate field research or an internship, and must result in a project that is approved by the graduate advisers in both programs.

6. An internship of 12 units (one semester) beyond the coursework is required of students who have not had equivalent experience. Students should consult with the public administration graduate adviser before enrolling.

7. Students must pass the American Council of Teachers of Foreign Language (ACTFL) oral proficiency examination in either Spanish or Portuguese with a score of 2.0 or above.

Master of Public Health Degree and Master of Arts Degree in Latin American Studies

General Information
The Graduate School of Public Health (GSPH) and the Center for Latin American Studies offer a concurrent graduate program leading to a Master of Public Health (MPH) in Epidemiology, Environmental Health, or Health Promotion and Behavioral Science and a Master of Arts (MA) in Latin American Studies. This concurrent program offers preparation in the fields of public health and Latin American studies for the purpose of promoting health, preventing disease, and enhancing the delivery of social and health services in Latino communities.

Admission to the Degree Curriculum
To request information about the concurrent graduate program in Public Health and Latin American Studies, applicants should contact either the Graduate School of Public Health Director of the MPH/MA program, or the Latin American Studies Director of the M.A. program, San Diego State University. Students must meet the general requirements to graduate study at the university as detailed in Part Two of this bulletin. Application materials are also available from the GSPH Web site at http://publichealth.sdsu.edu or the Center for Latin American Studies Web site at http://latinamericanstudies.sdsu.edu.

Advancement to Candidacy
All students must: (1) meet the general requirements for advancement to candidacy as described in Part Four of this bulletin; (2) pass an evaluation of progress towards the concurrent degree by both GSPH and Latin American Studies advisers; (3) complete all core courses in Public Health and Latin American Studies; (4) have earned at least 24 units of graduate study within the concurrent program with a minimum grade point average of 3.0 and no grade less than a B- in each core course; (5) have been recommended for advancement by the combined faculty advisory committee; (6) have an approved concurrent program of study; and (7) have a thesis proposal approved by the combined faculty advisory committee, which must include at least one faculty member from Latin American Studies and one faculty member from Public Health.

Upon advancement to candidacy, the student will enroll in Public Health or Latin American Studies 797 (Research) and Public Health or Latin American Studies 799A (Thesis). All students in the concurrent degree program are required to complete a thesis. This thesis will incorporate theory, method, and analytic techniques from both Public Health and Latin American Studies. The thesis topic and chair will be determined by the student and the faculty advisory committee. All students must pass the American Council of Teachers of Foreign Language (ACTFL) oral proficiency examination in either Spanish or Portuguese with a score of 2.0 or above.

Specific Requirements for the MPH/MA Degree
(Major Code: 12141/03081) (SIMS Code: 997310)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the student must complete an officially approved course of study of not less than 63 units as listed below.

General Requirements

<table>
<thead>
<tr>
<th>Core Courses (15 units)</th>
<th>Prescribed Electives from at least two departments (18 units)</th>
<th>Culminating Experience (6 units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P H 601 (3)</td>
<td>ANTH 508 (3)</td>
<td>P H 797 or LATAM 797 (3)</td>
</tr>
<tr>
<td>P H 602 (3)</td>
<td>ANTH 520 (3)</td>
<td>P H 799A or LATAM 799A (3)</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)
P H 603 (3)
P H 621 (3)
P H 622 (3)
P H 623 (3)
P H 627 (3)

Prescribed Electives (6 units)
P H 625 (3) P H 722 (3)
P H 626 (3) P H 724 (3)
P H 628 (3) P H 726 (3)
P H 649 (3) P H 823 (3)
P H 700A (3) P H 824 (3)
P H 721 (3)

Electives (3 units)

BIOL 585
NUTR 600, 606, 607, 700.
STAT 510, 550, 551A, 560, 672, 677,

Health Promotion and Behavioral Science Concentration
(SIMS Code: 997312)
Total Health Promotion and Behavioral Science Units = 24

Required Courses (15 units)
P H 607 (3)
P H 661 (3)
P H 662 (3)
P H 663 (3)
P H 666 (3)

Prescribed Electives (6 units)
P H 664 (3)
P H 667 (3)
P H 668 (3)
P H 700F (3)
P H 721 (3)
P H 762 (3)

Electives (3 units)
Three units to be selected with the approval of the faculty advisory committee.

Environmental Health Concentration
(SIMS Code: 997313)
Total Environmental Health Units = 24

Required Courses (18 units)
P H 603 (3)
P H 632 (3)
P H 634 (3)
P H 636 (3)
P H 638A (3)
P H 639 (3)

Prescribed Electives (at least 6 units)
P H 630 (3)
P H 635 (3)
P H 637 (3)
P H 721 (3)
P H 738 (3)
P H 798 (1-3)

Courses Acceptable on Master's Degree Programs in Latin American Studies (LATAM)
Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

UPPER DIVISION COURSES

LATAM 510. Latin America Research Through Primary Sources (3)
Prerequisite: Graduate standing or 12 units of upper division coursework on Latin America.
Primary sources, both textual and material to interpret the past. Skills to conduct research in an archive, library, museum, or private collection in Latin America. How to incorporate primary sources into a major research project.

LATAM 525. Race in Mexico: From Conquest to the Revolution (3)
(Same course as Chicana and Chicano Studies 525)
Prerequisite: Upper division or graduate standing.
Ways race and racial identities have been constructed in Mexico from early 1500s through 1940. Caste system, ideologies of mestizaje and indigenismo and their impact on revolutionary nationalism.

LATAM 540. History, Society, and Ecology of Baja Peninsula (3)
Prerequisites: Latin American Studies 101; Geography 102; Anthropology 102 or Political Science 103.
Historical and social anthropology of Baja Peninsula, current issues in socio-economy of a small region, relations between human activity and natural environment, flora and fauna of region, and challenges to ecological preservation.

LATAM 550. Mexican-US Border from a Latin American Perspective (3)
Prerequisites: Six upper division units with Latin American content. Spanish proficiency. Multidisciplinary analysis of Mexican-US border region.

LATAM 555. Women's Rights and Citizenship in Latin America (3)
Prerequisites: Latin American Studies 101; Political Science 103 or Women's Studies 101.
Women's roles in war, counter-insurgency and human rights movements of 1970s and 1980s; women and social movements; female citizenship and socio-political participation in Latin American countries.

LATAM 560. Latin America After World War II (3)
Prerequisites: Latin American Studies 101 and Political Science 566.
Major socioeconomic and political changes in Latin America since World War II and inter-American relations during the same period. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

LATAM 580. Special Topics (1-4)
Prerequisite: Six upper division units in Latin American content courses.
Interdisciplinary study of selected Latin American topics. Credit will vary depending on the scope and nature of the topic. Whenever appropriate, the course will be taught by a team of instructors representing two or more disciplines. May be repeated with different content. See Class Schedule for specific content. Maximum credit eight units.

Anthropology Courses (ANTH)
ANTH 508. Medical Anthropology (3)
ANTH 520. Ethnographic Field Methods (3)
ANTH 582. Regional Anthropology (3)*
ANTH 583. Topical Anthropology (3) *

Art Courses (ART)
ART 561. Mesoamerican Art: Olmecs to Aztecs (3)
ART 562. Art of Latin America (3)
ART 596. Advanced Studies in Art and Art History (1-4)*

Communication Course (COMM)
COMM 596. Selected Topics (1-4)*
### Latin American Studies

#### Comparative Literature Courses (C LT)
- C LT 594. Topics in Literature and the Arts (3)
- C LT 596. Topics in Comparative Literature (3)*

#### Economics Courses (ECON)
- ECON 561. International Trade (3)
- ECON 565. North American Economic Relations (3)
- ECON 592. International Monetary Theory and Policy (3)
- ECON 596. Experimental Topics (3)*

#### Geography Courses (GEOG)
- GEOG 507. Geography of Natural Vegetation (3)
- GEOG 554. World Cities: Comparative Approaches to Urbanization (3)
- GEOG 596. Advanced Topics in Geography (1-3)*

#### History Courses (HIST)
- HIST 550. Colonial Mexico (3)
- HIST 551. Modern Mexico (3)
- HIST 558. Latin America in World Affairs (3)
- HIST 596. Selected Studies in History (1-4)*

#### Journalism and Media Studies Course (JMS)
- JMS 591. International Telecommunications (3)

#### Law

With the permission of the graduate adviser and the approval of the Division of Graduate Affairs, classified graduate students may take a maximum of nine units of law at California Western School of Law through an affiliation agreement between the two institutions. San Diego State students must be enrolled for graduate courses at San Diego State University in the semester they are taking courses at California Western School of Law. Please consult with the graduate adviser for a listing of the specific law courses offered.

#### Political Science Courses (POL S)
- POL S 531. Interest Groups and Political Movements (3)
- POL S 555. Comparative Political Systems (3)
- POL S 560. Comparative Public Policy (3)
- POL S 564. Environmental Politics in Global Perspective (3)
- POL S 566. Political Change in Latin America (3)
- POL S 567. Political Systems of Latin America (3)
- POL S 568. Mexican Politics (3)
- POL S 577. Principles of International Law (3)

#### Sociology Courses (SOC)
- SOC 522. The Family in Comparative and Cross-Cultural Perspectives (3)
- SOC 555. Immigrants and Refugees in Contemporary American Society (3)
- SOC 596. Current Topics in Sociology (1-3)*

#### Spanish Courses (SPAN)
- SPAN 502. Genre Studies in Spanish American Literature (3)
- SPAN 515. Mexican Literature (3)
- SPAN 520. Caribbean Area Countries Literature (3)
- SPAN 549. Spanish Phonetics and Phonology (3)
- SPAN 581. Mexican Sociolinguistics (3)
- SPAN 596. Selected Studies in Spanish (3)*

#### Women's Studies Courses (WMNST)
- WMNST 512. Latinas in the Americas (3)
- WMNST 515. Women: Myth, Ritual, and the Sacred (3)
- WMNST 553. Women and the Creative Arts (3)
- WMNST 565. Women: Health, Healing, and Medicine (3)
- WMNST 580. Women, Development, and the Global Economy (3)
- WMNST 596. Topics in Women's Studies (3)*

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*Acceptable when of relevant content.

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

- **LATAM 700. Current Issues in Latin American Politics (3)**
  - Prerequisites: Graduate standing, Latin American Studies 601, and six upper division units in either history or political science.
  - Directed research on topics selected from a designated area of Latin American politics and history. May be repeated with new content. Maximum credit six units applicable to a master's degree.

- **LATAM 795. Latin American Studies Internship (3) Cr/NC**
  - Prerequisites: Latin American Studies 601 and consent of instructor.
  - A 160-hour internship approved by instructor in public and private agency.

- **LATAM 797. Research (1-3) Cr/NC/RP**
  - Prerequisite: Consent of graduate adviser.
  - Research in one of the fields of Latin American studies. Maximum credit six units applicable to a master's degree.

- **LATAM 798. Special Study (1-3) Cr/NC/RP**
  - Prerequisites: Consent of staff, to be arranged with the director and instructor.
  - Individual study. Maximum credit six units applicable to a master's degree.

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

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

#### Anthropology Courses (ANTH)
- ANTH 600. Seminar in Archaeology (3)
- ANTH 602. Seminar in Ethnology (3)
- ANTH 621. Seminar in Topical Anthropology (3)
- ANTH 797. Research (3) Cr/NC/RP
- ANTH 798. Special Study (1-3) Cr/NC/RP

#### Art Courses (ART)
- ART 760. Seminar in Twentieth Century Art (3)
- ART 798. Special Study (1-3) Cr/NC/RP

#### City Planning Course (C P)
- C P 670. History of Urban Planning (3)

#### Communication Course (COMM)
- COMM 798. Special Study (1-3) Cr/NC/RP
### Economics Courses (ECON)
- ECON 696. Experimental Topics (3)*
- ECON 700. Seminar in Microeconomic Applications (3)*
- ECON 720. Seminar in Development and Planning (3)
- ECON 730. Seminar in Macroeconomic Policy (3)
- ECON 750. Seminar in History of Economic Thought (3)*
- ECON 797. Research (3) Cr/NC/RP
- ECON 798. Special Study (1-3) Cr/NC/RP

### English Courses (ENGL)
- ENGL 601. Literary Study in a Multicultural World (3)*
- ENGL 604. Seminar: Literary Period or Movement (3)*
- ENGL 606. Seminar: A Literary Type (3)*
- ENGL 626. Comparative Literature (3)*
- ENGL 696. Special Topics (3)*
- ENGL 700. Seminar: A Major Author or Authors (3)*
- ENGL 726. Seminar: Issues in Comparative Literature (3)*
- ENGL 798. Special Study (1-3) Cr/NC/RP

### Geography Courses (GEOG)
- GEOG 696. Advanced Special Topics in Geography (3)*
- GEOG 740. Seminar in Human Geography (3)*
- GEOG 760. Seminar in Behavioral and Social Geography (3)*
- GEOG 797. Research (1-3) Cr/NC/RP
- GEOG 798. Special Study (1-3) Cr/NC/RP

### History Courses (HIST)
- HIST 640. Directed Readings in Latin American History (3)
- HIST 795. Area Studies in History (1-3) Cr/NC
- HIST 797. Research (3) Cr/NC/RP
- HIST 798. Special Study (1-3) Cr/NC/RP

### Political Science Courses (POL S)
- POL S 655. Seminar in General Comparative Political Systems (3)*
- POL S 661. Seminar in the Political Systems of the Developing Nations (3)*
- POL S 667. Seminar in Latin American Political Systems (3)
- POL S 675. Seminar in International Relations (3)*
- POL S 676. Seminar in International Political Economy (3)
- POL S 795. Problem Analysis (3)*
- POL S 797. Research in Political Science (3) Cr/NC/RP
- POL S 798. Special Study (1-3) Cr/NC/RP

### Public Administration Course (PA)
- PA 798. Special Study (1-3) Cr/NC/RP

### Sociology Courses (SOC)
- SOC 696. Experimental Topics (3)*
- SOC 720. Seminar in Social Institutions (3)
- SOC 740. Seminar in Social Psychology: Sociological Approaches (3)
- SOC 798. Special Study (1-3) Cr/NC/RP

### Spanish Courses (SPAN)
- SPAN 601. Seminar in Hispanic Literary Theory (3)
- SPAN 696. Selected Topics (3)*
- SPAN 750. Seminar in Spanish American Literature (3)
- SPAN 755. Seminar in Spanish American Culture, Film, and Society (3)
- SPAN 770. Applied Spanish Linguistics for Teachers (3)
- SPAN 798. Special Study (1-3) Cr/NC/RP

### Television, Film and New Media Course (TFM)
- TFM 798. Special Study (1-3) Cr/NC/RP

### Women's Studies Courses (WMNST)
- WMNST 601. Foundations of Feminist Scholarship (3)
- WMNST 602. Seminar: Methods of Inquiry in Women’s Studies (3)
- WMNST 603. Seminar: Advanced Feminist Theory (3)
- WMNST 604. Seminar: Gender, Culture, and Representation (3)
- WMNST 605. Seminar: Women, Relationships, and Social Policy (3)
- WMNST 696. Selected Topics in Women’s Studies (3-6)*
- WMNST 701. Seminar in Women's Studies (3)*
- WMNST 798. Special Study (1-3) Cr/NC/RP

*Acceptable when of relevant content.
Liberal Arts and Sciences
In the College of Arts and Letters

OFFICE: Nasatir Hall 203
TELEPHONE: 619-594-4826 / FAX: 619-594-1325
E-MAIL: clewis@rohan.sdsu.edu
http://www.malas.sdsu.edu
Director: William A. Nericcio, Ph.D.
Program Coordinator: David “McHank” McHenry

Participating Faculty
Susan E. Cayleff, Ph.D., Professor of Women’s Studies
Patricia J. Geist-Martin, Ph.D., Professor of Communication
D. Emily Hicks, Ph.D., Professor of English and Comparative Literature
and Chicana and Chicano Studies
Alan E. Kilpatrick, Ph.D., Professor of American Indian Studies
William A. Nericcio, Ph.D., Professor of English and
Comparative Literature
Steven L. Barbone, Ph.D., Associate Professor of Philosophy
Jung Min Choi, Ph.D., Associate Professor of Sociology
Stephen A. Colston, Ph.D., Associate Professor of History
Elizabeth A. Colwill, Ph.D., Associate Professor of Women's Studies
Sarah S. Elkind, Ph.D., Associate Professor of History
Doreen J. Mattingly, Ph.D., Associate Professor of Women's Studies
Ellen Quandahl, Ph.D., Associate Professor of Rhetoric and
Writing Studies
Sthaneshwar Timalsina, Ph.D., Associate Professor of Religious
Studies
Sandra A. Wawrytko, Ph.D., Associate Professor of Philosophy
Kathy S. Williams, Ph.D., Associate Professor of Biology

John and Jane Adams Endowment
John R. Adams was an esteemed faculty member of San Diego State University from 1928 until his retirement in 1968, whereupon he accepted the position of University Archivist. Dr. Adams was a professor of English and chair of the Division of Humanities. He and Jane Adams were generous benefactors to SDSU throughout their lives and they established a Charitable Living Trust to be used to promote liberal education. Today some of those funds are used in the MALAS program to support graduate assistantships and to help pay for academic retreats, workshops, and lectures. In addition, MALAS has arrangements with two sister institutions, the University of Maastricht in The Netherlands and Simon Fraser University in Canada, to convene an annual conference that revolves among the three sites. Funds from the Adams Endowment are used to send students to present papers at Maastricht and Simon Fraser.

General Information
The College of Arts and Letters offers a flexible multidisciplinary master’s degree in the liberal arts and sciences. An alternative approach to traditional graduate education, the program consists of coursework that crosses disciplinary boundaries so as to better appreciate the richness of existence and begin to apply multiple perspectives to the complex realities that face us. From explorations of the human condition to the social impacts of technology, the program focuses on issues central to the meaning and quality of our lives and the creation of sustainable, just, communities.

In existence since 1987, the Master of Arts in Liberal Arts and Sciences is equally well suited to students who recently achieved the bachelor’s degree, students preparing for the Ph.D., professionals for whom the master’s degree may mean promotion or career advancement, and life-long learners in search of personal enrichment and social and intellectual community. We welcome applications from K-12 teachers, community activists, and policy makers. MALAS draws upon SDSU faculty who are trained in disciplines but whose teaching and scholarship makes connections across disciplines. Interplays among the humanities, the social sciences, the natural sciences, and the arts are taken up in four required courses. These seminars seek to understand contemporary life and construct positive futures but they also push the level of discourse to foundational questions of epistemology and perennial philosophy, such as the existence of truth, goodness, and beauty. Particular attention is given to understanding the psychological, economic, and environmental consequences of globalization, and to the ways that human values are embodied in and transformed by modes of consumption, labor, and material culture. The four core courses act to ground and center five elective courses, selected by each student to customize a program that captures his or her interests.

Admission to Graduate Study
In addition to satisfying the requirements for admission to the university with classified graduate standing as described in Part Two of this bulletin, the student seeking admission must: (1) have a grade point average of 3.0 or better on work completed during the last 60 units for the baccalaureate degree, (2) have an acceptable score on the GRE General Test (combined verbal and quantitative), (3) complete a statement of purpose essay, and (4) submit two letters of recommendation.

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

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to Master of Arts in Liberal Arts and Sciences.

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

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

Master of Arts in Liberal Arts and Sciences
The following materials should be submitted by November 1 (October 1 for international students) for admission for the spring semester and May 1 for the fall semester to:
Master of Arts in Liberal Arts and Sciences
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-8137

(1) Statement of purpose essay;
(2) Two letters of recommendation.
Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy as described in Part Four of this bulletin. In addition, the students must (1) satisfactorily complete 12 units, with a minimum grade point average of 3.0, including 9 units of core seminars as stipulated (MALAS 600A, 600B, 600C, 600D) and (2) have a thesis or project proposal which has received the approval of the Graduate Liberal Arts and Sciences Committee and its director.

Specific Requirements for the Master of Arts Degree in Liberal Arts and Sciences
(Major Code: 49017) (SIMS Code: 114501)
In addition to meeting the basic requirements for the Master of Arts degree in Liberal Arts and Sciences as described in Part Four of this bulletin, the student must complete a graduate program of 30 units, 15 units of which must be in 600- and 700-level courses. Up to 15 units of coursework can be taken at the 500-level. The total program includes:
1. MALAS 601 (3).
2. MALAS 600A, 600B, 600C, or 600D in any combination (9 units). Each course may be repeated once with new content and, in excess of nine units, can be used for elective credit.
3. MALAS 799A (3): Thesis or Project, or MALAS 795 (3) Plan B, Comprehensive Examination.
4. 15 units of electives selected with approval of the MALAS director.

Students may select either Plan A or Plan B in consultation with the MALAS director. In addition to meeting the distribution requirements given above, students electing Plan A must complete MALAS 799A (Thesis or Project). Students electing Plan B must complete MALAS 795 (Studies in the Liberal Arts and Sciences) and pass a written comprehensive examination in lieu of the thesis.

All programs must be approved by the MALAS director in consultation with the Graduate Liberal Arts and Sciences Committee.

Courses Acceptable on Master’s Degree Program in Liberal Arts and Sciences
(MALAS)
Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

GRADUATE COURSES
MALAS 600. Interdisciplinary Study in Liberal Arts and Sciences (3-3-3-3)
Prerequisite: Graduate standing.
MALAS seminars are divided into four general areas with content that varies semester to semester. Each course may be repeated once with new content. See Class Schedule for specific content. Maximum credit six units for each of the following courses: MALAS 600A, 600B, 600C, 600D.
A. Cultural Studies
B. Science and Society, Environmental Studies
C. Globalization, Technology, Future Studies
D. Media Studies, Fine Arts, Transformative Arts
MALAS 601. Seminar in Interdisciplinary Thinking (3)
Prerequisite: Graduate standing.
Nature of interdisciplinary thinking. Ways of knowing and schools of thought in multiple disciplines. Interdisciplinary methods to analyze social issues. See Class Schedule for specific content.
MALAS 795. Studies in Liberal Arts and Sciences (3) Cr/NC
Prerequisite: Graduate standing.
Individual preparation for comprehensive examination for students taking the Master of Liberal Arts and Sciences under Plan B.
MALAS 798. Special Study (3) Cr/NC/RP
Prerequisite: Graduate standing.
Individual study on a given topic through interdisciplinary perspectives.
MALAS 799A. Thesis or Project (3) Cr/NC/RP
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for Master of Arts degree in Liberal Arts and Sciences.
MALAS 799B. Thesis or Project Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.
Registration required in any semester or term following assignment of RP in MALAS 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.
MALAS 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program courses.
Registration required of students whose only requirement is completion of the comprehensive examination for the master’s degree. Registration in 799C limited to two semesters.
Linguistics
In the Department of Linguistics and Asian/Middle Eastern Languages
In the College of Arts and Letters

OFFICE: Education and Business Administration 334
TELEPHONE: 619-594-5268 / FAX: 619-594-4877
http://www.rohan.sdsu.edu/dept/linguist/index.html

Faculty
Ghada Osman, Ph.D., Associate Professor of Arabic,
Chair of Department
Zev Bar-Lev, Ph.D., Professor of Linguistics, Emeritus
Soonja Choi, Ph.D., Professor of Linguistics (Graduate Adviser)
Jean Mark Gawron, Ph.D., Professor of Linguistics
Yoshiko Higurashi, Ph.D., Professor of Japanese
(Director, Japanese Language Program)
Jeffrey P. Kaplan, Ph.D., Professor of Linguistics
Gail L. Robinson, Ph.D., Professor of Linguistics
Robert Underhill, Professor of Linguistics, Emeritus
Eniko Csomay, Ph.D., Associate Professor of Linguistics and
Associate Dean of the College of Arts and Letters
Ryu Kitajima, Ph.D., Associate Professor of Japanese
Robert P. Malouf, Ph.D., Associate Professor of Linguistics
Deborah Poole, Ph.D., Associate Professor of Linguistics
Betty T. R. Samraj, Ph.D., Associate Professor of Linguistics
Ruey-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 curriculum for ESL/EFL/ELD classrooms (including community college and K-12 levels) or planning to pursue a doctorate in applied linguistics; 3) Computational Linguistics, for those planning a career in business or industry in computational linguistics, or a doctorate in this area. In addition to completing coursework for one of the specializations and demonstrating proficiency in a foreign language, students are required to submit a thesis (Plan A) or pass a comprehensive examination (Plan B).

All students who complete the required program will receive a Master of Arts degree in linguistics. If requested, the department will provide a letter designating a student's specialization for purposes of employment or application for further study. The specializations and language research interests of faculty members in this program are:

Zev Bar-Lev – ESL, discourse analysis, linguistics and computers; Hebrew, Arabic, and Russian.
Soonja Choi – Psycholinguistics, first and second language acquisition, cognition and language, ESL; materials development; Korean, French.
Eniko Csomay – ESL, corpus linguistics, discourse analysis, language variation, classroom discourse, research methods.

Jean Mark Gawron – Computational linguistics (parsing, pragmatic narrowing, machine translation); semantics (quantification, anaphora, comparatives, lexical semantics).
Yoshiko Higurashi – Phonology, accent and intonation, syllable structure, speech pathology, intercultural communication, Japanese language teaching.
Jeffrey P. Kaplan – Syntax, semantics, pragmatics, discourse, language and law; Swahili.
Gregory D. Keating – Second language acquisition, psycholinguistics (eye-tracking research), sentence processing, Spanish linguistics.
Ryu Kitajima – Second language acquisition, language assessment, teaching methodologies and language pedagogy.
Robert P. Malouf – Computational linguistics, statistical natural language processing, machine learning, constraint-based grammar formalisms.
Deborah Poole – Classroom interaction, discourse analysis, cross-cultural interaction, ESL methods and materials.
Gail L. Robinson – Second language methodology, second language and culture acquisition, psycholinguistics; Spanish.
Robert Underhill – Descriptive linguistics, phonology, syntax, discourse; Turkish, Native American languages, Southeast Asian languages.
Ruey-Juian Regina Wu – Conversation analysis, pragmatics, and functional linguistics, with particular emphasis on Mandarin Chinese; language assessment; teaching methodologies, and language pedagogy.

Admission to Graduate Study
In addition to meeting the requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin, the student must have a Bachelor of Arts degree in linguistics or a related field that would demonstrate adequate preparation for the program. Students applying for admission should electronically submit the university application available at http://www.csumentor.edu 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 Eastern 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.

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(2) GRE scores (http://www.ets.org, SDSU institution code 4682). All students are required to have GRE scores of 1050 or better on the combined verbal/quantitative portions of the test (with a minimum of 500 on each part).

(3) English language score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682). Students who have a B.A. from a university where English is not the primary medium of instruction are required to have English language scores of 570 or better. The TWE (Test of Written English) is also required, and will primarily be used to advise students regarding their program of courses.

**Department of Linguistics and Asian/Middle Eastern Languages**

The following materials should be mailed or delivered to:

Department of Linguistics and Asian/Middle Eastern Languages (EBA-334)  
(Attention: Graduate Adviser)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-7727

(1) A statement of purpose (250-500 words) which demonstrates an understanding of the SDSU program and which show interest in an area of research that is within the department's score of expertise;

(2) Two letters of recommendation be sent directly from the recommenders (who can evaluate the applicant's academic potential) to the Department of Linguistics and Asian/Middle Eastern Languages graduate adviser.

A student who is deficient in any of the above requirements may be considered for conditional admission. A candidate may be required to complete specified courses within a specific time period in addition to completing the minimum 30 units required for the degree.

The fall semester graduate application (CSU Mentor on-line application is February 1. In order to ensure consideration, other application materials must be sent to the Office of Graduate Admissions (transcripts and test scores) and to the department (statement of purpose and recommendation letters) by March 1.

For any updates about graduate admission and information about spring semester admission, go to the department Web site at http://www-rohan.sdsu.edu/dept/linguist/graduate_information/admissions.htm. For additional information, contact Yasmine Panahi at ypanahi@mail.sdsu.edu and request an M.A. information packet.

**Advancement to Candidacy**

All candidates must satisfy the general requirements for advancement to candidacy as described in Part Four of this bulletin. In addition to the requirements listed, students must demonstrate reading or speaking knowledge of at least one foreign language prior to advancement to candidacy.

**Specific Requirements for the Master of Arts Degree**

(Major Code: 15051) (SIMS Code: 114701; TESOL Applied 114705; Computational Linguistics 114706)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Four of this bulletin, the student must complete a graduate program of at least 30 units of 500-, 600-, and 700-level courses to include Linguistics 502, 503, and 796 (a prerequisite to Linguistics 502 and 503 is completion of Linguistics 501 or equivalent). A minimum of 15 of the units taken must be from 600- or 700-level courses.

All candidates selecting the General Linguistics specialization must complete either Linguistics 621 or Linguistics 622, and six units from the following: Linguistics 610, 620, 640, 654, 660, 696 (with general linguistics content). Under certain circumstances comparable courses taken at other institutions may count towards the certificate. A prerequisite to the Advanced Certificate requires Linguistics 652; two courses from Linguistics 650, 653, 655, and 796 (when offered with applied linguistics content); and one course from Linguistics 530, 522, 623, 654, and 795. Students must obtain a 3.0 GPA overall in the courses for the advanced certificate. The prerequisite to the Advanced Certificate is the Basic Certificate or its equivalent. A student's entire program comprising Basic and Advanced Certificates must include at least one course from Linguistics 530, 622, 623, 654, and 795. Under certain circumstances comparable courses taken at other institutions may count toward the certificate. Such courses must be evaluated and approved by the certificate adviser. For information on the Basic Certificate, please see the General Catalog.

**Courses Acceptable on Master’s Degree Programs in Linguistics (LING)**

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

**UPPER DIVISION COURSES**

LING 501. Fundamentals of Linguistics (3)  
Prerequisite: Upper division standing. Principles of modern linguistics, with attention to English phonetics, phonology, morphology, syntax, semantics and pragmatics; universals and typology. (Formerly numbered Linguistics 520.)

LING 502. Language in Mind and Society (3)  

LING 503. Functions of Language (3)  
Prerequisite: Linguistics 501. Proof of completion of prerequisite required: Copy of transcript. Empirical methods in linguistics. Phonological structure of English and other languages. Functional and discourse related approaches to language (e.g. parallelism, recursion). Connections between morphosyntactic concepts and functional/discourse concepts to conduct text analysis.
LING 505. Writing for Graduate Students (3)
Prerequisite: Conditional or classified admission to an SDSU graduate program or undergraduates with consent of instructor.
Conventions of scholarly writing appropriate for student papers, theses, or academic journal articles. Development of research questions and literature reviews as appropriate for students' disciplines. Revision of current or previous course papers according to disciplinary conventions.

LING 521. Phonology (3)
Prerequisite: Linguistics 420 or 501.
Theoretical principles of transformational-generative phonology.

LING 522. Syntax (3)
Prerequisite: Linguistics 420 or 501.
Theoretical principles of transformational-generative syntax.

LING 523. Morphology (3)
Prerequisite: Linguistics 420 or 501.
Theoretical principles of words structure, including inflection, derivation, and compounding; organization of the lexicon; structure of inflectional paradigms; morphophonological and morphosyntactic alterations; and computational applications.

LING 524. American Dialectology (3)
Prerequisite: Upper division standing.

LING 525. Semantics and Pragmatics (3)
Prerequisite: Linguistics 420 or 501.
Advanced semantic theory: systematic analysis of the interaction of sequences of language with real world context in which they are used.

LING 530. English Grammar (3)
Prerequisite: Six upper division units in linguistics.
English morphology, syntax, and discourse structure, including simple and complex sentence structure; lexical categories and subcategories; discourse functions of selected constructions. Problems and solutions in teaching English grammar.

LING 550. Theory and Practice of English as a Second Language (3)
Prerequisite: Linguistics 420 or 501.
The nature of language learning; evaluation of techniques and materials for the teaching of English as a second language.

LING 551. Sociolinguistics (3)
Prerequisite: A course in introductory linguistics.
Investigation of the correlation of social structure and linguistic behavior.

LING 552. Psycholinguistics (3)
Prerequisite: Linguistics 420 or 501.
Psychological and mental processes related to comprehension, production, perception, and acquisition of language in adults and children.

LING 554. Child Language Acquisition (3)
Prerequisite: Linguistics 420 or 501.
Theories and research methods in child language acquisition; quantitative and qualitative analyses of data at various levels of grammar (phonology, morphology, lexicon, syntax, and discourse) using language and acquisition corpora.

LING 555. Practical Issues in Teaching English as a Second Language (3)
Prerequisite: Credit or concurrent registration in Linguistics 550. Practical approaches to applications of the theory of English as a Second Language (ESL) and methodology for speaking, reading, listening, writing; techniques for facilitating growth of communicative competence.

LING 556. Computer Assisted Language Learning and Teaching (3)
Prerequisite: Credit or concurrent registration in Linguistics 550. Theory and practice of computer assisted language learning and language teaching. Hands-on experience with pedagogical aspects of using technology in the language classroom.

LING 570. Mathematical Linguistics (3)
Prerequisite: Two linguistics courses.
Mathematical tools for linguistics: set theory; basic algebraic structures such as groups, lattices, and Boolean algebras; formal language theory; propositional and first-order logic. Some emphasis on proofs. Applications to linguistics.

LING 571. Computational Corpus Linguistics (3)
Prerequisite: Two linguistics courses.
Practical introduction to computation with text corpora and introduction to Python. Tokenizing, part-of-speech tagging, and lemmatizing (stemming) large corpora. Writing of Python programs required.

LING 581. Computational Linguistics (3)
(Same course as Computer Science 581)
Prerequisites: Linguistics 570 or Mathematics 245; Linguistics 571 or Computer Science 320.
Basic concepts in computational linguistics including regular expressions, finite-state automata, finite-state transducers, weighted finite-state automata, and n-gram language models. Applications to phonology, orthography, morphology, syntax, Probabilistic models. Statistical techniques for speech recognition.

LING 582. Computational Syntax and Semantics (3)
Prerequisites: Linguistics 522 and 581.
Review of finite-state and context free languages; unification grammars; problems of meaning and intention in computational systems. Example applications from information retrieval, dialogue, and machine translation systems.

LING 596. Selected Topics in Linguistics (1-3)
Prerequisite: Upper division standing.
Advanced study of selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES

LING 610. Topics in Historical Linguistics (3)
Prerequisite: Three upper division units in linguistics, preferably Linguistics 410, 501, or 521.
Methods and principles used in historical study of language; processes of language change in phonology, syntax, and semantics; linguistics reconstruction; origin of language; language families; development of writing. Analysis of Indo-European, Old English, or Middle English. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

LING 620. Advanced Formal Syntax (3)
Prerequisite: Linguistics 522.
Advanced study of formal syntactic theory.

LING 621. Advanced English Phonology (3)
Prerequisite: Linguistics 521.

LING 622. Discourse and Syntax (3)
Prerequisite: Linguistics 503, 522, or 530.
Functional and discourse-oriented approaches to syntax and syntactic approaches to discourse.

LING 623. Immigrant Languages (3)
Prerequisite: Linguistics 420 or 501.
Contrastive structure of selected languages representing significant immigrant populations in San Diego; emphasis on phonological, orthographic, morphological, lexical and syntactic features.

LING 640. Field Methods in Linguistics (3)
Prerequisites: Linguistics 521 and credit or concurrent registration in Linguistics 622.
Principles and techniques of linguistic analysis working directly with native informants, including phonemic, grammatical, and syntactic analysis and text collection and interpretation.
LING 650. Materials Development in Applied Linguistics (3)
Prerequisite: Linguistics 550.
Materials development and adaptation for teaching English as a second language and foreign language.

LING 652. Second Language Acquisition (3)
Prerequisites: Linguistics 452, 552 or 554, and 550. Analyses of theories of second language acquisition; theoretical and empirical bases of current second language teaching methodologies.

LING 653. ESL Reading and Writing (3)
Prerequisite: Linguistics 550.
Application of discourse and reading theory to the teaching and testing of ESL reading and writing. Issues of coherence, process-product, genre studies.

LING 654. Language and Cognition (3)
Prerequisite: Linguistics 552.
Language production, comprehension, and acquisition, as these relate to human cognition.

LING 655. English for Specific Purposes and Content-Based Instruction (3)
Prerequisites: Linguistics 420, 501, and 550. Theory, practice, and history of these two related approaches to EFL.

LING 656. Quantitative Research Methods in Language Studies (3)
Prerequisite: Linguistics 420 or 501.
Research design and quantitative research methods for linguistic applications. Critical evaluation of published research studies; empirical research project.

LING 657. Foundations of Language Assessment (3)
Prerequisites: Linguistics 550; and Linguistics 650, 652 or 653. Fundamental principles and goals of language assessment and language assessment research: characteristics of assessment methods; analyzing test tasks; designing test items; describing test scores; approaches to estimating reliability; validity and validation; authenticity and impact.

LING 660. History of Linguistics (3)
Prerequisite: Two courses in linguistics or equivalent background. Background and development of modern linguistic theory.

LING 681. Statistical Methods in Computational Linguistics (3)
Prerequisite: Linguistics 581. Statistical methods for computational linguistics. Markov chains, hidden Markov models, statistical estimators for n-gram models, finding collocation and subcategorization frames, collecting selectional preferences, part-of-speech tagging, word sense disambiguation, probabilistic context-free grammars.

LING 696. Advanced Topics in Linguistics (1-3)
Prerequisite: Consent of instructor. Advanced study in specific areas of linguistics. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

LING 740. Internship in English as a Second Language and Foreign Language Teaching (3) Cr/NC
Prerequisite: Linguistics 550. Internship in teaching English as a second language and English as a foreign language, offering work experience with practicing professionals.

LING 795. Seminar in Linguistics (3)
Prerequisite: Completion of three units of 600- and 700-numbered courses in the master’s program for linguistics. Research in linguistics, course content varying according to instructor. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

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

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

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

LING 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program courses. Registration required of students whose only requirement is completion of the comprehensive examination for the master’s degree. Registration in 799C limited to two semesters.
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. Shen, Ph.D., Professor of Mathematics, Chair of Department
Ricardo Carretero, Ph.D., Professor of Mathematics
(M.S. Dynamical Systems Graduate Adviser)
José E. Castillo, Ph.D., Professor of Mathematics
(M.S. Computational Science Graduate Adviser)
T. Marc Dunster, Ph.D., Professor of Mathematics (Coordinator)
Tunc Geveci, Ph.D., Professor of Mathematics
Stefen Hui, Ph.D., Professor of Mathematics
(M.S. Communication Systems Graduate Adviser)
F. David Lesley, Ph.D., Professor of Mathematics (Emeritus)
Joseph M. Mahaffy, Ph.D., Professor of Mathematics
Antonio Palacios, Ph.D., Professor of Mathematics
Peter Salamon, Ph.D., Professor of Mathematics
(Coordinator and M.S. Applied Mathematics Graduate Adviser)
Vadim Ponomarenko, Ph.D., Associate Professor of Mathematics
(M.A. Mathematics Graduate Adviser)
Roxana N. Smarandache, Ph.D., Associate Professor of Mathematics

Mathematics Education
Joanne Lobato, Ph.D., Professor of Mathematics
B. Ricardo Nemirovsky, Ph.D., Professor of Mathematics
Chris L. Rasmussen, Ph.D., Professor of Mathematics
Janet S. Bowers, Ph.D., Associate Professor of Mathematics
(M.A.T.S. Graduate Adviser)
Susan D. Nickerson, Ph.D., Associate Professor of Mathematics

Associateships
Graduate teaching associateships in mathematics are available to a limited number of qualified students. Application blanks and additional information may be secured from the chair of the department.

General Information

The Department of Mathematics and Statistics offers graduate study leading to the Master of Arts degree in mathematics, the Master of Science degree for teaching service with a concentration in mathematics, the Master of Science degree in applied mathematics, the Master of Science degree in statistics (see the Statistics section of this bulletin for a description of the statistics program and courses), the Master of Science degree in Applied Mathematics with a Concentration in Mathematical Theory of Communications Systems, and the Master of Science degree in Applied Mathematics with a Concentration in Dynamical Systems. Faculty active in research direct theses and research projects in most general areas of the mathematical sciences: in complex analysis, differential equations, number theory, numerical analysis; in cognitive science, computer education and problem solving within mathematics education; in climate mathematics, computational mathematics, control theory, dynamical systems, financial mathematics, mathematics of communication, mathematical physics, modeling and optimization within applied mathematics.

Opportunities for research in mathematics education are available through research facilities in the Center for Research in Mathematics and Science Education.

The department hires qualified graduate students as teaching associates. These positions serve as an important stepping stone on the path to a career in the teaching of mathematics at various levels.

Admission to Graduate Study

All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin.

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

All applicants must submit admissions materials to SDSU Graduate Admissions.

Graduate Admissions

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

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

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

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Four of this bulletin. In addition, the student must have passed a qualifying examination in some programs.

Specific Requirements for the Master of Arts Degree in Mathematics

(Major Code: 17011) (SIMS Code: 776301)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must meet the following requirements:

1. Complete 30 units of approved 500, 600, and 700 level courses, of which at least 24 units must be in mathematics. At least 21 units must be at the 600 level or above. Mathematics 600, 601, and 602 may not be part of this degree. No more than six units of Mathematics 797 and 798 will be accepted toward the degree.
2. Among the 30 units of coursework, students must include at least two courses in the area of algebra chosen from courses Mathematics 630A, 630B, 631A, 631B.
3. Before entering the program, students should have completed the following courses or their equivalents: Mathematics 521B, 524, 532, 534B. If a student has not had these courses before entering the program, they must be taken during the first year. (A maximum of two of these courses may be applicable toward the degree course requirements.)
4. With departmental approval, students may select Plan A and complete Mathematics 799A or Plan B requiring a written comprehensive examination based on materials to be selected by the department from among Mathematics 623, 627A, 627B, 630A, 630B, 631A, 631B.
Communications Systems Certificate

The Communications 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

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

UPPER DIVISION COURSES

NOTE: Proof of completion of prerequisites required for all upper division courses: Copy of transcript.

MATH 509. Computers in Teaching Mathematics (3)
Two lectures and three hours of laboratory.
Prerequisite: Mathematics 252.
Solving mathematical tasks using an appropriate computer interface, and problem-based curricula. Intended for those interested in mathematics teaching.

MATH 510. Introduction to the Foundations of Geometry (3)
Prerequisite: Mathematics 122 or 151.
The foundations of Euclidean and hyperbolic geometries. Highly recommended for all prospective teachers of high school geometry.

MATH 521A. Abstract Algebra (3)
Prerequisites: Mathematics 245 and 254.
Abstract algebra, including elementary number theory, groups, and rings.

MATH 521B. Abstract Algebra (3)
Prerequisite: Mathematics 521A.
Continuation of Mathematics 521A. Rings, ideals, quotient rings, unique factorization, noncommutative rings, fields, quotient fields, and algebraic extensions.

MATH 522. Number Theory (3)
Prerequisite: Mathematics 245.
Theory of numbers to include congruences, Diophantine equations, and a study of prime numbers: cryptography.

MATH 523. Mathematical Logic (3)
Prerequisite: Mathematics 245.
Propositional logic and predicate calculus. Rules of proof and models. Completeness and the decidability 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.

MATH 531. Partial Differential Equations (3)
Prerequisites: Mathematics 252 and 337.
Boundary value problems for heat and wave equations: eigenfunction expansions, Sturm-Liouville theory and Fourier series. D’Alembert’s solution to wave equation; characteristics. Laplace’s equation, maximum principles, Bessel functions.

MATH 532. Functions of a Complex Variable (3)
Prerequisite: Mathematics 252.
Analytic functions, Cauchy-Riemann equations, theorem of Cauchy, Laurent series, calculus of residues, and applications.

MATH 533. Vector Calculus (3)
Prerequisite: Mathematics 254 or 342A.
Scalar and vector fields; gradient, divergence, curl, line and surface integrals: Green’s, Stokes’ and divergence theorems. Green’s identities. Applications to potential theory or fluid mechanics or electromagnetism.

MATH 534A. Advanced Calculus I (3)
Prerequisites: Mathematics 245 and 254: or 342A.
Completeness of the real numbers and its consequences, sequences of real numbers, continuity, differentiability and integrability of functions of one real variable.

MATH 534B. Advanced Calculus II (3)
Prerequisite: Mathematics 534A.
Series and sequences of functions and their applications, functions of several variables and their continuity, differentiability and integrability properties.

MATH 537. Ordinary Differential Equations (3)
Prerequisite: Mathematics 337.
Theory of ordinary differential equations: existence and uniqueness, dependence on initial conditions and parameters, linear systems, stability and asymptotic behavior, plane autonomous systems, series solutions at regular singular points.

MATH 538. Discrete Dynamical Systems and Chaos (3)
Prerequisites: Minimum grade of C in Mathematics 351; Mathematics 254; 254A, 254B.
One- and two-dimensional iterated maps, equilibria and their stability, sensitive dependence on initial conditions, Lyapunov exponents, horseshoe maps, period doubling, chaotic attractors, Poincare maps, stable/unstable manifolds, bifurcations. Applications in biology, chemistry, physics, engineering, and other sciences.

MATH 541. Introduction to Numerical Analysis and Computing (3)
Prerequisite: Mathematics 254 or 342A. Recommended: Computer Science 107 or 205.
Solution of equations of one variable, direct methods in numerical linear algebra, least squares approximation, interpolation and uniform approximation, quadrature.

MATH 542. Introduction to Numerical Solutions of Differential Equations (3)
Prerequisites: Mathematics 337 and 541.

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)
Prerequisites: Mathematics 245 or 254.
Undirected and directed graphs, trees, Hamiltonian circuits, classical problems of graph theory including applications to linear systems.

MATH 562. Mathematical Methods of Operations Research (3)
Prerequisites: Mathematics 252 and 254.
Linear algebra 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 578. 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: 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: Award of graduate teaching associateship in mathematics.
Supervision in teaching mathematics. Lecture writing, style of lecture presentation and alternatives, test and syllabus construction, and grading system. Not applicable to an advanced degree. Required for first semester GTA's.

MATH 797. Research (1-3) Cr/NC/RP
Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units applicable to a master's degree.

MATH 798. Special Study (1-3) Cr/NC/RP
Prerequisite: Consent of instructor.
An intensive study in advanced mathematics. May be repeated with new content. Maximum credit six units applicable to a master's degree.

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

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

MATH 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program courses.
Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.
Mathematics and Science Education

In the College of Sciences and
In the College of Education

For further information regarding programs, consult the following:

Ph.D. Program .......................... CRMSE
6475 Alvarado Rd., #336
619-594-4696
e-mail: mathsciphd@sdsu.edu

M.A. Program ......................... Mathematics and Statistics
619-594-6191
Teacher Education
619-594-6131

Mathematics and Science Education Faculty
Joanne Lobato, Ph.D., Professor of Mathematics, Coordinator for Ph.D. Program
Nadine S. Bezuk, Ph.D., Professor of Teacher Education
Kathleen M. Fisher, Ph.D., Professor of Biology, Emeritus
Fred M. Goldberg, Ph.D., Professor of Physics
Cheryl L. Mason, Ph.D., Professor of Teacher Education
B. Ricardo Nemirovsky, Ph.D., Professor of Mathematics
Walter C. Oechel, Ph.D., Distinguished Professor of Biology
Randolph A. Philipp, Ph.D., Professor of Teacher Education
Chris L. Rasmussen, Ph.D., Professor of Mathematics
Stephen K. Reed, Ph.D., Professor of Psychology
Alberto J. Rodriguez, Ph.D., Professor of Policy Studies in Language and Cross-Cultural Education
Janet S. Bowers, Ph.D., Associate Professor of Mathematics (M.A.T.S. Graduate Adviser)
Alexander W. Chizhik, Ph.D., Associate Professor of Teacher Education (Ph.D. Graduate Adviser)
Victoria R. Jacobs, Ph.D., Associate Professor of Teacher Education Lisa L. Clement Lamb, Ph.D., Associate Professor of Teacher Education
Susan D. Nickerson, Ph.D., Associate Professor of Mathematics Donna Ross, Ph.D., Associate Professor of Teacher Education Kathryn S. Williams, Ph.D., Associate Professor of Biology Rafaela M. Santa Cruz, Ph.D., Associate Professor of Teacher Education
Sara Unsworth, Ph.D., Assistant Professor of Psychology
Jessica Pierson, Ph.D., Assistant Professor of Teacher Education
Meredith Houle, Ph.D., Assistant Professor of Teacher Education

Committee for Mathematics Education
Nadine S. Bezuk, Ph.D., Professor of Teacher Education
Joanne Lobato, Ph.D., Professor of Mathematics
B. Ricardo Nemirovsky, Ph.D., Professor of Mathematics
Randolph A. Philipp, Ph.D., Professor of Teacher Education
Chris L. Rasmussen, Ph.D., Professor of Mathematics
Janet S. Bowers, Ph.D., Associate Professor of Mathematics
Victoria R. Jacobs, Ph.D., Associate Professor of Teacher Education
Lisa L. Clement Lamb, Ph.D., Associate Professor of Teacher Education
Susan D. Nickerson, Ph.D., Associate Professor of Mathematics
Rafaela Santa Cruz, Ph.D., Associate Professor of Teacher Education
Jessica L. Pierson, Ph.D., Associate Professor of Teacher Education

Section I. Master's Degree Programs

General Information
The Department of Mathematics and Statistics offers two specializations in its program of graduate study leading to a Master of Arts degree for teaching service. The specialization for community college teaching offers candidates a program designed to provide them with the mathematical breadth necessary to teach a wide variety of lower-division collegiate mathematics courses, while also providing them with a better understanding of the issues involved in teaching and learning mathematics. The specialization for secondary teaching offers coursework designed to strengthen the mathematical background of secondary teachers, to provide teachers with a deeper understanding of learning and teaching mathematics in grades 7-12, and to allow teachers the opportunity to analyze curriculum and evaluation efforts in a manner that can lead them to make reasoned judgments about curricular, testing, and instructional issues in grades 7-12 mathematics.

Courses described in this section may also be of interest to students seeking the Master of Arts degree in education with concentrations in elementary curriculum and instruction or secondary curriculum and instruction, offered by the School of Teacher Education.

Associateships
Graduate teaching associateships in mathematical sciences are available to qualified students. Support for qualified candidates may also be available through the School of Teacher Education, through the Center for Research in Mathematics and Science Education or through employment on faculty research grants. Applications are available from the appropriate campus offices.

All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin.

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy as described in Part Four of this bulletin. In addition, students seeking the Master of Arts degree for teaching service must have passed a qualifying examination in mathematics education.

Specific Requirements for the Master of Arts Degree for Teaching Service in Mathematics
(Major Code: 17011) (SIMS Code: 776305)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the students must complete a graduate program of at least 30 units, 24 of which must be from the Department of Mathematics and Statistics. At least 15 of the 24 must be 600- and 700-numbered courses. A student's program must be prepared in conference with and approved by the graduate adviser.

The two specializations leading to the Master of Arts for teaching service require completion of a specific pattern of graduate units described below.
The Master of Arts degree in education with a concentration in K-8 mathematics education is designed to provide teachers with expertise in mathematics and science education. The program faculty at SDSU are members of the College of Sciences at UCSD and the University of California, San Diego, offer jointly a doctoral program in mathematics and science education. The program is administered under the Division of Social Sciences (cognitive science, philosophy, and sociology). The program faculty at UCSD, also an interdisciplinary group, are members of the Division of Natural Sciences (biology, chemistry, mathematics, and physics) or the Division of Social Sciences (cognitive science, philosophy, and sociology). The program is administered under the College of Sciences at SDSU and under the Division of Natural Sciences at UCSD. The research interests of the participating faculty members cover a wide range of issues in the learning and teaching of mathematics and the sciences. Graduates of the program will be qualified to take a variety of professional positions, including faculty appointments in universities, colleges, and community colleges; specialist positions in public school districts; and out-of-school employment in settings that require expertise in mathematics and science education.

Doctoral Faculty

The following faculty members of the cooperating institutions participate in the joint doctoral program, being available for direction of research and as departmental members of joint doctoral committees.

San Diego State University:
Coordinator: Joanne Lobato
Graduate Adviser: Randolph A. Philipp
Staff Adviser: Deb Escamilla

University of California, San Diego:
Coordinators: Jeff Rabin and Gabriele Wienhausen
Graduate Adviser: Jeff Rabin
Staff Adviser: Sherry Seethaler

Doctoral Program Members: Bezuk, Bowers, Chizhik, Fisher, Goldberg, Houle, Jacobs, Lamb, Lobato, Mason, Nemirovsky, Nickerson, Oechel, Phillip, Pierson, Rasmussen, Reed, Rodriguez, Ross, Unsworth, Santa Cruz, William

Section II.
Doctoral Program
http://crmse.sdsu.edu/msed

General Information

The Master of Arts degree in education with a concentration in K-8 mathematics education is designed to provide teachers with expertise in mathematics and science education. 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.

Core Program (12 units):

Mathematics Education 600, 601, 602, and Mathematics Education 603; six units selected from Mathematics 509, 720, Mathematics Education 604, 605, 606; nine units of electives selected with the approval of the adviser; and Mathematics 799A, Thesis.

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.

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.

Section II.
Doctoral Program
http://crmse.sdsu.edu/msed

General Information

San Diego State University and the University of California, San Diego, offer jointly a doctoral program in mathematics and science education. The program faculty at SDSU are members of the College of Sciences and the College of Education and are affiliated with the Center for Research in Mathematics and Science Education (CRMSE). They represent a number of different disciplines, including biology, geological sciences, mathematics, physics, psychology, and teacher education. The program faculty at UCSD, also an interdisciplinary group, are members of the Division of Natural Sciences (biology, chemistry, mathematics, and physics) or the Division of Social Sciences (cognitive science, philosophy, and sociology). The program is administered under the College of Sciences at SDSU and under the Division of Natural Sciences at UCSD.

The research interests of the participating faculty members cover a wide range of issues in the learning and teaching of mathematics and the sciences. Graduates of the program will be qualified to take a variety of professional positions, including faculty appointments in universities, colleges, and community colleges; specialist positions in public school districts; and out-of-school employment in settings that require expertise in mathematics and science education.

Doctoral Faculty

The following faculty members of the cooperating institutions participate in the joint doctoral program, being available for direction of research and as departmental members of joint doctoral committees.

San Diego State University:
Coordinator: Joanne Lobato
Graduate Adviser: Randolph A. Philipp
Staff Adviser: Deb Escamilla

University of California, San Diego:
Coordinators: Jeff Rabin and Gabriele Wienhausen
Graduate Adviser: Jeff Rabin
Staff Adviser: Sherry Seethaler

Doctoral Program Members: Bezuk, Bowers, Chizhik, Fisher, Goldberg, Houle, Jacobs, Lamb, Lobato, Mason, Nemirovsky, Nickerson, Oechel, Phillip, Pierson, Rasmussen, Reed, Rodriguez, Ross, Unsworth, Santa Cruz, Williams

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 analytical sections of the Graduate Record Examinations.

Students with a master's degree in mathematics education can also be considered for admission if they meet the following requirements: (a) a bachelor's degree in mathematics; (b) a master's degree in mathematics education that includes graduate level mathematics courses in analysis and algebra; and (c) coursework in geometry at the advanced undergraduate or graduate level. The GPA, GRE, and graduate standing requirements specified in the previous paragraph must also be met. Students entering the program with a master's degree in mathematics education are required to take additional mathematics courses as specified in “Specific Requirements for the Doctor of Philosophy Degree.” Students with a master's degree in physics education, chemistry education, or biology education should contact the MSED program coordinators.

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

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Mathematics and Science Education Ph.D. Program.

Graduate Admissions

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

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

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

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

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

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

Mathematics and Science Education

The following materials should be delivered or mailed to:

Mathematics and Science Education Ph.D. Program
CRMSE, San Diego State University
6475 Alvarado Road, Suite 206
San Diego, CA 92120-5013

(1) Application for doctoral program in mathematics and science education (http://www.sci.sdsu.edu/CRMSE/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);

(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: MSED 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 or 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.
- (2) Sociology. UCSD: SOSC 270, SOSC 117/EDS 117, or SOSC 126/EDS 126.
- (3) Mathematics and Science: Graduate level courses in biology, chemistry, mathematics, or physics.
- (4) Teaching Experience: An option for students who have not yet had teaching experiences at both the K-12 and college levels is to take a second teaching practicum.

G. 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.

Second Year

Option A: Mathematics and Science Education students will increase the breadth and depth of their mathematical knowledge by fulfilling the requirements specified for Option A or Option B.

Additional Requirements for Students Entering with a Master's Degree in Mathematics Education. Students who are admitted into the doctoral program with a master's degree in mathematics education will increase the breadth and depth of their mathematical knowledge by fulfilling the requirements specified for Option A or Option B.
Option A.
UCSD: MATH 240A, 240B, 240C and
Pass the UCSD comprehensive examination on analysis at the
master's level and
One graduate algebra course: UCSD: MATH 200A or SDSU:
MATH 627A or 623. MATH 623 can only be selected if the
student has already taken a graduate level abstract algebra
course.
Option B.
Select two of SDSU: MATH 627A, 627B, 623, and
Pass the SDSU comprehensive examination on algebra at the
master's level and
UCSD: MATH 240A
Whether the student selects Option A or Option B, the year-long
sequence in algebra or analysis must be taken in Year 1 of the doctoral
program. All of the requirements for Option A or Option B must be
completed prior to the second year examination; however, students
are strongly encouraged to fulfill all of the requirements in Year 1. A
grade of B or better must be earned in each course.
Examinations. Students in the doctoral program will be evaluated
at the following levels:
(1) First Year Evaluation. The student's ability to master graduate
level course material may be assessed after completion of no
more than 24 semester units of coursework. This evaluation
may take place not later than the third semester of the student's
enrollment in the program. The evaluation will be based on the
student's performance in coursework and on indicated
research competence, and it will be undertaken by the
student's advisory committee together with instructors from the
student's first year courses.
(2) Comprehensive Examinations. At the end of the second year,
the student will take a written comprehensive examination in
general cognition and an oral examination on issues of learning
pertinent to the student's area of specialization.
(3) Oral Examination. During the third year in the program, the
student will make an oral presentation to the dissertation
committee to accompany a written proposal for the doctoral
thesis. The student will be questioned on both the topic of the
investigation and on the proposed research methodology.
Upon successful completion of this presentation, the student
will be recommended for advancement to candidacy for the
doctoral degree.
(4) Dissertation Defense. After completion of the dissertation, the
candidate will present a public defense of the doctoral
dissertation. A copy of the dissertation must be made available
to the doctoral faculty at both institutions four weeks prior to the
defense. Copies of the abstract of the dissertation, along with
the announcement of the defense, must be publicly available
four weeks before the defense. The student's dissertation
committee will make a recommendation to the graduate deans
to pass or fail the student.
Faculty Advisers. Upon admission to the doctoral program, the
program directors will assign each student a faculty adviser at both
universities. The faculty advisers will serve as advisers until the
student's dissertation committee is appointed.

Dissertation Committee. The dissertation committee will be
composed of five members with at least two faculty members from
each campus. The student will select members of the dissertation
committee in consultation with program faculty and the graduate
advisers.
Dissertation. Following the successful completion of all
prescribed coursework and qualifying examinations, the major
remaining requirement for the Ph.D. degree will be the satisfactory
completion of a dissertation consisting of original research carried out
under the guidance of the major professor. Approval of the completed
dissertation attests that an organized investigation that expands the
frontiers of knowledge and understanding in mathematics and
science education has been carried out.
Award of the Degree. The Doctor of Philosophy degree in
Mathematics, 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 informa-
tion, 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):
1. Six units to include Mathematics 501A, 501B, 502A, 502B,
   503A, 503B.
2. Six units to include Mathematics Education 571 and 572.
Requirements for the upper elementary mathematics specialist
certificate (12 units):
1. Six units to include Mathematics 501A, 501B, 502A, 502B,
   504A, 504B.
2. Six units to include Mathematics Education 573 and 574.
Students must pass all courses with Cr/NC grading or receive at
least a C (2.0) in all courses taken for a letter grade. With consent of
the adviser, six units of education coursework may be applied toward
a master's degree in education.
Algebra Specialist Certificate  
(Offered through the College of Extended Studies)

The algebra specialist certificate program enhances the ability of credentialed middle school teachers to prepare students to succeed in algebra I and improve student achievement in algebra I. Persons earning the certificate will develop special expertise in the teaching of mathematics in middle schools. For application or further information, contact the program advisers.

Prerequisites for admission include the following:
1. Teaching credential.
2. Two years of classroom teaching experience.
3. Two letters of recommendation.

Required courses (16 units):
- MATH 506A: Algebra in the Middle Grades I (3)
- MATH 506B: Algebra in the Middle Grades II (3)
- MATH 507A: Functions and Study of Change I (2)
- MATH 507B: Functions and Study of Change II (3)
- MTHED 575: Developing Algebraic Understanding in Middle Grades (Part I) (2)
- MTHED 576: Developing Algebraic Understanding in Middle Grades (Part II) (3)

Students must receive a C (2.0) in all certificate courses taken for a letter grade. With consent of the adviser, six units of mathematics education coursework with a grade of B (3.0) or better may be applied toward a master’s degree in education.

Courses Acceptable on Master’s Degree Program in Mathematics Education (MTHED)

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

UPPER DIVISION COURSES

MTHED 571. Children's Mathematics Understanding in Primary Grades (Part I) (1-3)
Prerequisite: Admission to mathematics specialist certificate program.
Ongoing assessment and instructional decision-making for increasing children’s achievement and understanding of number, operations, and algebra in the primary grades. Maximum credit three units.

MTHED 572. Children's Mathematics Understanding in Primary Grades (Part II) (1-3)
Prerequisite: Admission to mathematics specialist certificate program.
Ongoing assessment and instructional decision-making for increasing children’s achievement and understanding of rational numbers, geometry, and measurement in the primary grades. Maximum credit three units.

MTHED 573. Children's Mathematics Understanding in Upper Elementary Grades (Part I) (1-3)
Prerequisite: Admission to mathematics specialist certificate program.
Ongoing assessment and instructional decision-making for increasing children’s achievement and understanding of number, operations, and algebra in the upper elementary grades. Maximum credit three units.

MTHED 574. Children's Mathematics Understanding in Upper Elementary Grades (Part II) (1-3)
Prerequisite: Admission to mathematics specialist certificate program.
Ongoing assessment and instructional decision-making for increasing children’s achievement and understanding of rational numbers, geometry and measurement in the upper elementary grades. Maximum credit three units.

MTHED 575. Developing Algebraic Understanding in Middle Grades (Part I) (1-3)
Prerequisite: Admission to algebra specialist certificate program.
Ongoing assessment and instructional decision-making to increase children’s achievement and understanding of rational number concepts in middle grades, laying foundation for understanding algebra. Maximum credit three units.

MTHED 576. Developing Algebraic Understanding in Middle Grades (Part II) (1-3)
Prerequisite: Admission to algebra specialist certificate program.
Ongoing assessment and instructional decision-making to increase children’s achievement and understanding of proportional reasoning, patterns, and functions in middle grades, laying foundation for understanding algebra. Maximum credit three units.

Courses Acceptable on Master’s and Doctoral Degree Programs in Mathematics and Science Education (MTHED) (MSE)

Mathematics and Science Education (MTHED) GRADUATE COURSES

MTHED 600. Teaching and Learning Mathematics in the Early Grades (Pre-K to 4) (3)
Prerequisites: Mathematics Education 603 or 604 or Teacher Education 610A and K-12 teaching experience.

MTHED 601. Teaching and Learning Mathematics in the Middle Grades (3)
Prerequisites: Mathematics Education 604 or Teacher Education 610A and K-12 teaching experience.
Research on teaching and learning mathematics in grades five through eight. Innovative middle grades mathematics curricula, promising instructional practices. Assessment techniques to guide instructions.

MTHED 603. Seminar on Learning Theories in Mathematics Education (3)
Prerequisite: Consent of instructor or graduate adviser.
Application of several major learning theories (e.g. behaviorism, structuralism, radical constructivism, information processing, and sociocultural perspectives) to research on the learning and teaching of mathematics.

MTHED 604. Seminar on Teaching Issues in Mathematics (3)
Prerequisite: Consent of instructor or graduate adviser.
Mathematics education research pertaining to teaching of mathematics. Readings chosen to bridge theory and practice divide.

MTHED 605. Algebra in the 7-14 Curriculum (3)
Prerequisite: Consent of instructor or graduate adviser.
Curricular change in algebra, with attention to experimental curricula, to research on learning of algebra, and to influences of technology. Implications for instruction.

MTHED 606. Selected Topics in 7-14 Mathematics Curriculum (3)
Prerequisite: Consent of instructor or graduate adviser.
Curricular change in school mathematics, to include geometry, probability, and statistics, with attention to contemporary curricula, to research on learning and teaching in those areas, and to the influences of technology. Implications for instruction.

MTHED 607. Seminar on Research in Undergraduate Mathematics Education (3)
Prerequisite: Consent of instructor or graduate adviser.
Research in undergraduate mathematics education and its implications for teaching. Topics include research on student thinking on concepts from calculus through abstract algebra and the teaching and learning of proof.
Mathematics and Science Education (MSE)

DOCTORAL COURSES

MSE 801. Faculty Research (1) Cr/NC
Prerequisite: Admission to doctoral program in Mathematics and Science Education.

Issues of learning with reference to how they are addressed by doctoral faculty. Students will interview and write a one-page statement of research interests for each of eight doctoral faculty members.

MSE 802. Orientation Practicum (1-3) Cr/NC
Prerequisite: Admission to doctoral program in Mathematics and Science Education.

Experience with research programs will introduce students to a variety of research questions and approaches. One research program per unit; minimum three units required in program. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units applicable to an advanced degree.

MSE 805. Supervised Teaching of Teacher Preparation Courses (3) Cr/NC/RP
Prerequisite: Admission to doctoral program in Mathematics and Science Education.

Students will plan and teach, under supervision, a course that prepares prospective teachers to teach mathematics or science at either the elementary or secondary level.

MSE 806. Supervised School Practicum (3) Cr/NC/RP
Prerequisite: Admission to doctoral program in Mathematics and Science Education.

School-based project focusing on inservice of teachers or on curriculum development, or work with a school district administrator or mathematics or science.

MSE 807. Specially Designed Practicum (3) Cr/NC/RP
Prerequisite: Admission to doctoral program in Mathematics and Science Education.

Practical experience to assist students in gaining experience in career they have selected.

MSE 810. Seminar in Research Design (3)
Prerequisites: Admission to doctoral program in Mathematics and Science Education; Psychology 670A, and consent of instructor.

Students and faculty present ongoing research for discussion and critique.

MSE 820. Research Project (3-6) Cr/NC/RP
Prerequisite: Admission to doctoral program in Mathematics and Science Education.

Participation in an ongoing research project and development of a related study.

MSE 830. Research Seminar (3)
Prerequisite: Successful completion of qualifying examination.

Students and faculty present ongoing research for discussion and critique.

MSE 897. Doctoral Research (1-15) Cr/NC/RP
Prerequisite: Mathematics and Science Education 820.

Independent investigation in general field of the dissertation.

MSE 898. Doctoral Special Study (1-8) Cr/NC/RP
Prerequisites: An officially constituted doctoral committee and advancement to candidacy.

Individual study in the field of specialization.

MSE 899. Doctoral Dissertation (1-15) Cr/NC/RP
Prerequisites: An officially constituted dissertation committee and advancement to candidacy.

Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.

For additional courses applicable to the Master of Arts degree for Teaching Service see:

Mathematics 600. Geometrical Systems
Mathematics 601. Topics in Algebra
Mathematics 602. Topics in Analysis

For additional courses related to mathematics education see:

Teacher Education 511. Assessment in Mathematics Education
Teacher Education 610A. Seminar in Mathematics Education–Elementary School

Courses for Mathematics and Algebra Specialist Certificate Programs and Mathematics Education (MATH)

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

UPPER DIVISION COURSES

MATH 501A. Reasoning: Place Value and Arithmetic Operations (1)
Prerequisites: Teaching credential and consent of instructor.

Place value and its role in development and understanding of arithmetic operations, to include numeration systems, student methods, standard algorithms, and mental computation.

MATH 501B. Reasoning: Rational Numbers and Real Number Systems (1)
Prerequisites: Teaching credential and consent of instructor.

Rational numbers and structure of real number system, to include meanings and models for fractions with attention to operations on rational numbers.

MATH 502A. Reasoning: Geometric Shapes (1)
Prerequisites: Teaching credential and consent of instructor.

Geometry to include classification and representation of polyhedra, hierarchical relationships among quadrilaterals, symmetry and transformations in the plane.

MATH 502B. Reasoning: Measurement (1)
Prerequisites: Teaching credential and consent of instructor.

Key ideas of measurement, development of area formulas for two-dimensional figures, size changes, and similarity.

MATH 503A. Reasoning: Foundations of Quantitative Thinking (1)
Prerequisites: Teaching credential and consent of instructor.

Reasoning about quantities and their measurement and relationships among these quantities, to include representations of these relationships. Understand situations that call for additive or multiplicative reasoning; important role of these ideas in development of quantitative reasoning skills in primary grades.

MATH 503B. Reasoning: Foundations of Algebraic Thinking (1)
Prerequisites: Teaching credential and consent of instructor.

Pattern searching, equivalence, making and justifying conjectures. Preparation for teaching California required K-12 algebraic reasoning strand.
MATH 504A. Reasoning: Quantities and Mathematical Relationships (1)
Prerequisites: Teaching credential and consent of instructor. Reasoning about measurable characteristics in problem context, and relationships among these measurements. Additive, multiplicative reasoning, and proportional reasoning in middle grades.

MATH 504B. Reasoning: Algebra and Nature of Change (1)
Prerequisites: Teaching credential and consent of instructor. Pattern searching, generalizing, graphing to represent quantitative relationships, and role of these topics in preparing elementary and middle school students for algebra.

MATH 505A. Reasoning: Probability (1)
Prerequisites: Teaching credential and consent of instructor. Probabilistic situations, theoretical probabilities, and expected values.

MATH 505B. Reasoning: Statistics (1)
Prerequisites: Teaching credential and consent of instructor. Gathering, representing, and interpreting data sets, measures of central tendency, and characteristics of normal distributions.

MATH 506A. Algebra in the Middle Grades I (3)
Prerequisites: 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 506B. Algebra in the Middle Grades II (3)
Prerequisites: Mathematics 506A, practicing teachers with valid teaching credential, and consent of instructor. Mathematical foundations that underlie concepts and procedures emphasized in algebra I and algebra II as taught at middle and high school level, to include focus on functions in context of relations, patterns, and graphing.

MATH 507A. Functions and Study of Change I (2)
Prerequisites: Mathematics 506B, practicing teachers with valid teaching credential, and consent of instructor. Mathematical ideas surrounding linear functions and change to include proportionality, slope, and graphing. Arithmetic and geometric sequences.

MATH 507B. Functions and Study of Change II (3)
Prerequisites: Mathematics 507A, practicing teachers with valid teaching credential, and consent of instructor. Mathematical ideas surrounding nonlinear functions and variable rates of change to include quadratic and exponential situations.

GRADUATE COURSES

MATH 600. Geometrical Systems (3)
Prerequisites: Mathematics 521A and an upper division course in geometry. Ordered and affine geometries, decompositions, dilations. Projectivities and projective space. Absolute geometry, isometries, groups generated by inversions.

MATH 601. Topics in Algebra (3)
Prerequisites: Mathematics 521A and 534A. Unique factorization domains, rings and ideals, groups, algebraic field extensions. A course designed for secondary school teachers.

MATH 602. Topics in Analysis (3)
Prerequisites: Mathematics 521A and 534A. Topics in analysis, including the real number system, convergence, continuity, differentiation, the Riemann-Stieltjes integral, complex analysis, designed to give the secondary teacher a broad understanding of the fundamental concepts.

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
Brenton P. Dutton, M.M., Professor of Music
Karen J. Follingstad, D.M.A., Professor of Music
Richard A. Helzer, M.F.A., Professor of Music
Jane M. Kolar, Ph.D., Professor of Music
Richard Thompson, M.M., Associate Professor of Music
Eric S. Smigel, Ph.D., Assistant Professor of Music

Applied Music Instruction

Bassoon: Martchev, V.
Cello: Zhao
Clarinet: Renk
Classical Guitar: Benedetti, Romero, Wetzel
Composition: Dutton, Waters
Double Bass: Kurtz, Magnusson
Euphonium: Dutton
Flute: Martchev, P.
Harp: Mashkovtseva
Horn: Kitelinger
Jazz Guitar: Boss
Jazz Studies: Helzer, Thompson, Yeager
Non-Western Instruments: Specialists from specific cultures as available each semester
Oboe: Conaty
Opera: Evans-O’Connor
Percussion: Cohen, Holguin
Piano: Follingstad, Kolar
Saxophone: Rewoldt, Rekevics
Trombone: Covington, Pollack
Trumpet: Cannon, Wilds
Tuba: Dutton
Viola: Chen, Maril
Violin: Guidieri
Voice: Chi, MacKenzie, Nikkel, Toral, Tweed

Dance

Joseph W. Alter, M.F.A., Associate Professor of Dance
Leslie Seilers, M.F.A., Associate Professor of Dance

Scholarships

Information on music scholarships may be obtained by writing to the chair, Music Scholarship Committee, School of Music and Dance, San Diego State University.

General Information

The School of Music and Dance offers graduate study leading to the Master of Arts degree in music and the Master of Music degree. The school also offers advanced coursework in dance which may be used toward fulfilling advanced degree requirements in interdisciplinary studies and in other departments with the approval of the student’s graduate adviser.

With approval of the school, students electing to pursue the Master of Arts degree may specialize in one of the following fields: ethnomusicology; musicology; piano pedagogy or theory. Master of Music students may specialize in performance, composition, jazz or conducting.

Graduate students are prepared for careers that encompass scholarly research, teaching, performing, or creating new works.

Composition: Individual composition studies integrated with an awareness of global music practices.

Conducting: Literature and score analysis, hand techniques, rehearsal techniques, general preparation and performance in both the choral and instrumental areas.

Ethnomusicology: Study of global music with emphasis on cultural context, representation, ethnography, fieldwork, and performance.

Jazz Studies: Education, research, performance, and composition in all styles of jazz.

Musicology: With the approval of the faculty, students may select a topic in medieval, renaissance, baroque, classical, romantic, twentieth century music, or American music.

Performance: Performance studies are offered on all instruments and voice.

Pedagogical Studies: Preparation of the teacher of the child, adolescent, or adult students.

Theory: Comprehension of and facility with historical analytic techniques.

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 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 School of Music and Dance offers graduate study leading to the Master of Arts degree in music and the Master of Music degree.

Statement on Computers

Students must become competent in the operation of personal computers to include word processing software, presentation software, web-based applications, and music notation software. Students, especially those planning to pursue the composition or electro-acoustic composition track, are encouraged to own a Macintosh laptop computer capable of running sophisticated music notation/composition software. For additional information regarding suggested platform and software information, contact the School of Music and Dance.
Admission to Graduate Study in Music

Applicants must have completed a bachelor's degree with a major in music including full preparation in performance, theory, music history, and literature, or hold a bachelor's degree from an accredited institution and present sufficient evidence of study and experience in music to demonstrate the equivalency of a bachelor's degree with a major in music.

All domestic students must demonstrate a minimum 2.85 GPA. All foreign students must demonstrate a minimum 3.0 GPA and in cases where the primary instruction was in a language other than English, a minimum English language score of 550. Foreign applicants taking the computer-based English language test must achieve a minimum score of 213 or 80 or higher using the Internet version.

After taking placement examinations in Western music history, Western music theory, aural skills, and performance (where applicable), applicants will be admitted to the program with conditional graduate standing. Normally, one semester will be allowed to remove deficiencies indicated by these placement examinations.

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

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

Graduate Admissions

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

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

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

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

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

(3) English language or the computer-based English language score for foreign students; if instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).

School of Music and Dance

The following materials should be compiled in one envelope and sent directly to:

Director of Graduate Studies
School of Music and Dance
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7902

(1) Two letters of reference;

(2) A one-page statement of personal aims and goals.

(3) M.A. applicants: Refer to special requirements for Admission to Master of Arts Degree in Music in next column.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Four of this bulletin, and must have removed any deficiencies identified in the qualifying (placement) examinations by the end of the first semester.

Admission to Master of Arts Degree in Music

In addition to the general admission requirements, special admission requirements for the M.A. in ethnomusicology, if student has an undergraduate music degree, include: (a) submit a research paper; (b) prepare an audition on an instrument or voice in western or non-western music; (c) complete an interview; and (d) complete the qualifying (placement) examination in music history. If a potential graduate student in ethnomusicology has an undergraduate degree in anthropology or related humanistic discipline, the student must complete the equivalent of Music 205A and 205B, in addition to the requirements listed above.

Special admission requirements for the M.A. in musicology include: (a) the one-page statement of personal goals must describe how the student has been involved in music, why the student is interested in pursuing a graduate degree in musicology, and what research topics interest the student; (b) the two letters of reference should be from individuals who are in a position to comment on the student's potential to succeed in graduate work; (c) a 10 to 12-page paper on any topic of music history that reflects exceptional skills in critical thinking, to include references to appropriate literature, and demonstrates competence in spelling, grammar, organization, and citation format; and (d) interview.

In addition to the admission requirements for the School of Music, a student seeking the M.A. in piano pedagogy must: (a) submit an undergraduate research paper or research article on a pedagogical topic with references; (b) submit a DVD of recent piano teaching; and (c) complete an interview.

Specific Requirements for the Master of Arts Degree

(Major Code: 10051) (SIMS Code: 665302)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete a 30-unit graduate program of which at least 18 units must be in 600- and 700-numbered courses and which includes the following core: Music 612 or 613; 652, 653 or 654, and 654, and 690.

Students may choose either Plan A or Plan B. Students in Plan A are required to enroll in Music 799A, Thesis or Project, and to pass a final oral comprehensive examination on the thesis. Students in Plan B are required to enroll in Music 766, Graduate Lecture Recital. A written document is required of all students electing Plan B and students are required to pass a final oral comprehensive examination on the document. Musicology students are also required to complete a written comprehensive examination.

Master of Arts candidates in ethnomusicology and musicology must have a reading ability in an approved foreign language.

In addition to the requirements stated above, students must complete requirements in the selected specialization.

Ethnomusicology (SIMS Code: 665317)

Core: Music 612, 654, 690.
Program: Music 561 (6 units), 691; 766 (Plan B) or 799A (Plan A).
Electives: Nine units selected from Music 545, 570, 590, 652, or from approved 600 or 700 numbered courses with a minimum of three units from 600-700 numbered courses.

Musicology (SIMS Code: 665335)

Core: Music 613, 652, 690.
Program: Music 611, 612, 654, 691; 766 (Plan B) or 799A (Plan A).
Electives: Six units selected from Music 500 and 600 level courses; of which three units must be selected from courses in history, language, literature, or arts other than music.

Music Theory (SIMS Code: 665341)

Core: Music 613, 652, 690.
Program: Six additional units selected from Music 613 and 614; nine units selected from Music 570-589 (1-4 units), 590, 654, and 799A.
Electives: Three units.
Admission to Master of Music

In addition to meeting the admission requirements listed above, students who seek a performance specialization must pass an audition. Students seeking a composition specialization must submit musical scores of their original work. Those seeking a conducting specialization must submit evidence (programs, videotape) of their conducting expertise. The Master of Music is available with the following specializations: composition, conducting, performance and jazz studies. Please consult the School of Music and Dance Web site at http://musicdance.sdsu.edu for further information concerning admission.

Specific Requirements for the Master of Music Degree

(Major Code: 10041) (SIMS Code: 665303)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete a 30-unit graduate program, of which at least 18 must be in 600- and 700-numbered courses.

In order to be advanced to candidacy, students in vocal performance must satisfy either a music foreign language examination or satisfactorily complete one introductory college semester in French, German, and Italian.

A final oral comprehensive examination is required for all Master of Music candidates.

In addition to the requirements stated above, students must complete requirements in the specific program selected:

### Composition (SIMS Code: 665362)
- **Core:** Music 613, 652, 690.
- **Program:** Music 507; three additional units from Music 613; three additional units from Music 613 or 614; 651 (9 units); 767.
- **Electives:** Two units.

### Conducting (SIMS Code: 665372)
- **Core:** Music 613, 652, 690.
- **Program:** Music 554, 570-589 (2 units), 651 (9 units); 767.
- **Electives:** Five units.

### Jazz Studies (SIMS Code: 665378)
- **Core:** Music 614, 653, 690.
- **Program:** Music 613, 652, 690.
- **Performance (SIMS Code: 665386)
  - **Core:** Music 613, 652, 690.
  - **Program:** Music 554, 570-589 (vocal majors must choose opera) (3 units), 651 (9 units); 767.
  - **Electives:** Four units.

Refer to Graduate Music Student Handbook for further details.

Artist Diploma Advanced Certificate

(Major Code: 90045) (SIMS Code: 665388)

The artist diploma prepares preprofessional performance students for professional careers by giving focused instruction in all areas of performance including technique, interpretation, repertoire, stage deportment and communication skills, and knowledge of the business of professional performance.

Applicants must show proof of completion of an undergraduate music degree from an accredited institution with a GPA of 3.0 in the last 60 semester (90 quarter) units attempted. Successful completion of an entrance audition and a review of undergraduate transcripts are required for entrance to this certificate program. Students whose undergraduate degree is not in music must complete qualifying placement examinations in Western music theory, Western history and literature, and aural skills, in addition to the entrance audition. Students must enroll in this program as matriculated students.

Students must complete the following 24-unit curriculum: Music 515, 516 (2 units), 570-589 (vocal majors must choose opera) (4 units), 651 (8 units); 767; 798 (1 unit); four units to be selected from Music 507, 518A-518B, 541, 542, 543, 554 (2-4 units), 566A-566B (for jazz studies students only), 590, 641, 766, or 1-3 additional units of 798. Vocal students must demonstrate competency equal to a college-level course in French, German, and Italian.

The graduate adviser will be responsible for verifying a student's satisfactory completion of the academic requirements established for the program and for forwarding a completed copy of the verification form to Graduate and Research Affairs. Additionally, this adviser will direct the student into elective coursework that best suits the needs of the individual student.

All units in this certificate program are applicable to the various specializations in the M.A. in Music and the M.M. degree programs. However, not all courses are required in each specialization. Please see the requirements for each graduate specialization listed in the Graduate Bulletin.

Courses Acceptable on Master's Degree Programs in Music (MUSIC) (DANCE)

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

**Music (MUSIC)**

### UPPER DIVISION COURSES

**MUSIC 507. Composition Laboratory (1)**
- Three hours of laboratory.
- Prerequisites: Music 207 with a grade of C (2.0) or better and consent of instructor.
- Continuation of Music 207. Maximum credit two units.

**MUSIC 515. Professional Orientation for Music Performers (2)**
- One lecture and two hours of activity.
- Prerequisite: Twelve units of upper division or graduate standing in B.M. or M.M. degree. Others by consent of instructor.
- Conditions met in professional music world as well as opportunities available. Auditions, contracts, legal and tax responsibilities, media and press promotion, grants, professional management, partnerships.

**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 crosscultural music study.

MUSIC 554. Music Literature (2)
Prerequisite: Music 205B with a grade of C (2.0) or better.
Study of music literature. Analysis of scores and recordings. May be repeated with new course content. See Class Schedule for specific content. Maximum credit six units applicable to a bachelor’s and master’s degree.

MUSIC 560. Music and Visual Media (3)
Two lectures and three hours of activity.
Prerequisite: Music 460.
Techniques and aesthetics of combining music/sounds and visual elements, including contemporary film scoring techniques, sound design for installations and performance art, video game scoring and experimental immersive 3-D virtual reality.

MUSIC 561. Area Studies: Ethnomusicology (3)
Prerequisite: Graduate or upper division standing in music.
Principles of research. Cases study of selected areas. Theories of ethnomusicology and cross-cultural comparisons. See Class Schedule for specific content. Maximum credit six units.

MUSIC 566A-566B. Jazz Arranging and Composition (2-2)
Prerequisite: Music 561C.
Analysis of jazz compositions and arrangements; arranging and composing for specific content. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

MUSIC 570. Advanced Chamber Music (1)
Three hours.
Prerequisite: Consent of instructor.
Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

MUSIC 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 589. Jazz Ensemble (1)
Three hours.
Prerequisite: Consent of instructor.
Study and public performance of representative literature for the ensemble. Practical experience in rehearsal techniques. Maximum credit four units.

MUSIC 590. Advanced Practicum in Music (3)
Prerequisite: Consent of instructor in area of practicum.
Students will be assigned to appropriate class sections within selected undergraduate area as instructional assistants under staff supervision.

MUSIC 596. Special Topics in Music (1-3)
A specialized study of selected topics from the several areas of music. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

MUSIC 598. Music Review: History, Analysis, and Aural Skills (3) Cr/NC
Prerequisite: Admission to the graduate program.
Review basic concepts of music theory, aural skills, and music history required for full candidacy in the graduate music program. Not applicable to the master’s degree in music.

GRADUATE COURSES

MUSIC 611. Seminar in Musicology (3)
Systematic study of music based upon application of scientific investigation, philosophical speculation, modern historiography, and related academic disciplines in humanities and social sciences.

MUSIC 612. Seminar in Ethnomusicology Fieldwork Theory and Method (3)
Prerequisite: Credit or concurrent registration in Music 690.
Theory and method of ethnomusicology fieldwork research; ethnomusicological 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)
Prerequisite: Consent of staff; to be arranged with school director and instructor.
Current advanced analytic techniques in the jazz idiom.

MUSIC 641. Piano Pedagogy: Adolescent to Adult (3)
Two lectures and three hours of laboratory.
Prerequisite: Graduate standing.
Study of music through the piano for adolescent to adult with analysis and application of appropriate teaching procedures and learning theories. Analysis of literature with corresponding techniques, musical skills, and creativity. Supervised teaching.

MUSIC 651. Advanced Performance Studies (1-3)
Thirteen one-half hour private lessons (1 unit); thirteen one-hour private lessons (2 units); nineteen one-half hours private lessons (3 units).
Prerequisite: Audition before music faculty. Music 651B for one unit includes M.F.A. in drama students.
Advanced studies in technical, stylistic, and aesthetic elements of artistic performance culminating in a graduate recital. Maximum credit nine units, four to six of which are applicable to a master of arts degree. Music 651M will include regular ensemble conducting experience.

MUSIC 652. Seminar in Music History (3)
Prerequisite: Classified standing.
Intensive study of music history. Maximum credit nine units applicable to a master’s degree.

MUSIC 653. Seminar in Music History: Jazz (3)
Intensive historical study of the jazz idiom.

MUSIC 654. Seminar in Music History: Music Historiography in Global Perspective (3)
Prerequisite: Credit or concurrent registration in Music 690.
Music history through global case studies.

MUSIC 690. Seminar in Research Procedures in Music (3)
Reference materials, bibliography, investigation of current research in music, processes of thesis topic selection and techniques of scholarly writing.

MUSIC 691. Seminar in Professional Preparation for Academia (3)
Prerequisite: Music 690.
Professional music activities in academia. Prepare music graduate students for careers in higher education. Teaching and professional growth to include professional activities, ethics, professionalism, teaching practices, academic presentation, and publishing as related to discipline of music.

MUSIC 696. Special Topics in Music (1-3)
Prerequisite: Graduate standing.
Intensive study in specific areas of music. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

MUSIC 697. 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 699A. 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 699B. Thesis or Project Extension (0) Cr/NC/RP
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 699C. 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 696. Special Topics in Dance (1-3) Cr/NC
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 COURSE
N SCI 798. Special Study (1-3) Cr/NC/RP
Prerequisite: Consent of staff; to be arranged with coordinator and instructor. Individual study. Maximum credit six units applicable to a master's degree.
Faculty
John M. Lantz, Ph.D., Professor of Nursing, Emeritus, Interim Director of School
Janet L. Blenner, Ph.D., F.A.A.N., Professor of Nursing
Willa Fields, D.N.Sc., Professor of Nursing
Diane C. Hatton, D.N.Sc., Professor of Nursing, Associate Director for Research
Lauren F. Hunter, Ph.D., C.N.M., Professor of Nursing
Linda Robinson, Ph.D., Professor of Nursing
Jaynelle F. Stichler, D.N.Sc., F.A.C.H.E., F.A.A.N., Professor of Nursing
Lorraine T. Fitzsimmons, D.N.S., F.N.P., A.N.P.-B.C., Associate Professor of Nursing
Lembi Saarmann, Ed.D., Associate Professor of Nursing
Michael Gates, Ph.D., Assistant Professor of Nursing
Young-Shin Lee, Ph.D., Assistant Professor of Nursing
Diane Thomason, Ph.D., Assistant Professor of Nursing

General Information
The School of Nursing offers a two-year graduate curriculum leading to the Master of Science degree in nursing. The program will be prepared to function as middle or executive-level nursing administrators, nurse-midwives, clinical nurse specialists, nurse practitioners, community-based nurses/school nurses, and/or nurse educators. There are four concentrations: Community Health Nursing, Advanced Practice Nursing of Adults and the Elderly, Nursing Education, and Nursing Leadership in Health Care Systems. Students in the Community Health Nursing Concentration may specialize in Nurse-Midwife, Nurse-Midwife and Women’s Health Nurse Practitioner, or School Nursing. Students in the Advanced Practice Nursing of Adults and the Elderly are prepared as adult/gerontology nurse practitioners and clinical nurse specialists and may specialize in Acute Care/Critical Care. Students in the Nursing Education Concentration are prepared to practice in the academic and the clinical setting. The graduate program requires a minimum of 39 units. The program is designed for either full- or part-time study. All graduates of the University Program are prepared for beginning roles as nurse researchers and for further educational opportunities in doctoral studies.

A multitude of research opportunities are available to students in the program. The School of Nursing has clinical contracts with all of the leading research and clinical teaching health care agencies within the county. Furthermore, all graduate faculty are doctrally prepared, and students may have the opportunity to be involved in ongoing faculty research projects.

Application for Admission
Students applying for admission to the Master of Science degree in nursing should submit an application to the School of Nursing and to the university. Applications for the School of Nursing and university are available at http://nursing.sdsu.edu and http://www.csumentor.edu.

Detailed instructions, including application procedures, accompany the School of Nursing application form. Applications for all concentrations of study are accepted for fall semester. Applications are due by February 1 of each year for fall admission. All applicants must electronically submit the university application and admissions materials to SDSU Graduate Admissions and to the School of Nursing.

Admission to Graduate Study
In addition to the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin, a student must satisfy the following requirements before being recommended for admission to a program with classified standing:

1. Have a baccalaureate degree with a major in nursing from a program accredited by the National League for Nursing or Commission on Collegiate Nursing Education. Graduates from baccalaureate programs not having an upper division major in nursing or who have deficiencies will be considered on an individual basis and may be required to enroll in designated undergraduate courses and graduate courses beyond the minimum units necessary for advanced degrees.

2. Have a minimum cumulative grade point average of 3.0 on a 4.0 scale in undergraduate upper division courses.

3. Must have satisfactory score on GRE General Test.

4. Have a current California license to practice registered nursing.

5. One year of work experience as a registered nurse is preferred before starting concentration/specialization courses. For Nurse-Midwife applicants, the experience must be birth related. For the Advanced Practice Nursing of Adults and Elderly, three years of related experience is highly recommended. Prior experience is not required for concentrations in Nursing Education and Nursing Leadership in Health Care Systems.

6. Students in the School Nursing Specialization must also have satisfactorily completed an undergraduate community health nursing course.

7. Have satisfactorily completed a course in statistics. (Statistics 250 or equivalent with a grade of C or better)

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

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

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

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

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

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

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

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

School of Nursing
The following materials should be mailed or delivered to:

School of Nursing
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4158

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Conditional Admission

Students who do not satisfy all admission requirements to the School of Nursing may, with special consideration, be admitted in a conditionally classified graduate standing. At the deadline date specified on the conditional form (at time of acceptance), the faculty of the School of Nursing shall recommend to the graduate dean that the student:
1. Be disqualified from further study in the program, or
2. Be continued in conditionally classified status, or
3. Be granted full graduate classified standing.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as described in Part Four of this bulletin. Students must satisfactorily complete at least 12 units of nursing courses listed on the official program of study with a minimum grade point average of 3.0 and be recommended by the graduate adviser.

Specific Requirements for the Master of Science Degree

(Major Code: 12032)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree, as described in Part Four of this bulletin, the student must complete an officially approved 36-60 unit course of study. The program includes:
1. Twelve units of core courses to include Nursing 604A, 604B, 608, and 684.
2. A minimum of 18-45 units of graduate courses in the area of concentration or specialization.
3. Zero to six units of electives.

Students in all concentrations may choose between Plan A, Thesis or Project, or Plan B, Comprehensive Examination or Comprehensive Evidence-based change project. The choice of Plan A or Plan B should be made early in the program. Students should consult with the concentration chair for current policies. Up to nine semester units may be accepted in transfer from an accredited School of Nursing.

Community Health Nursing Concentration

(SIMS Code: 554621)

Admission currently suspended for Community Health Nursing Concentration. Admission is open to the Specialization in Nurse-Midwife and Women's Health Care Nurse Practitioner and to the Specialization in School Nursing.

Area of Concentration Courses

<table>
<thead>
<tr>
<th>Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>P H 601</td>
<td>Epidemiology</td>
</tr>
<tr>
<td>NURS 631</td>
<td>Community Health Nursing Practicum</td>
</tr>
<tr>
<td>NURS 632</td>
<td>Community Health Nursing</td>
</tr>
<tr>
<td>NURS 732</td>
<td>Advanced Community Health Nursing Practicum</td>
</tr>
<tr>
<td>NURS 736</td>
<td>Seminar in Community Health Problems</td>
</tr>
<tr>
<td>Total Units</td>
<td>39</td>
</tr>
</tbody>
</table>

Electives:
- NURS 799A Thesis OR NURS 798 | 3 |

Total Semester Units 54

Specialization as a Nurse-Midwife

(SIMS Code: 554636)

Graduates meet requirements for certification and licensure by the California Board of Registered Nursing. Graduates are eligible to sit for select national certification examinations. The program is accredited by the American College of Nurse-Midwives (ACME: Accreditation Commission for Midwifery Education, 8403 Colesville Road, Suite 1550, Silver Spring, MD 20910-6374, 240-485-1802), http://www.midwife.org/acme.cfm, and the Commission on Collegiate Nursing Education (CCNE). Part-time (3 to 4 years) and full-time (2 years) options of study are available. Required courses and units for the two-year nurse-midwife specialization are as follows:

Core Courses

<table>
<thead>
<tr>
<th>Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 632</td>
<td>Community Health Nursing</td>
</tr>
<tr>
<td>NURS 799A Thesis OR NURS 798 (Plan B)</td>
<td>3</td>
</tr>
<tr>
<td>Total Units</td>
<td>6</td>
</tr>
</tbody>
</table>

Specialization Courses

<table>
<thead>
<tr>
<th>Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 501</td>
<td>Advanced Health Assessment and Health Promotion</td>
</tr>
<tr>
<td>NURS 501L</td>
<td>Advanced Health Assessment and Health Promotion Laboratory</td>
</tr>
<tr>
<td>NURS 610</td>
<td>Pathophysiology in Adults and the Elderly</td>
</tr>
<tr>
<td>NURS 636</td>
<td>Women's Health Assessment and Management I</td>
</tr>
<tr>
<td>NURS 637</td>
<td>Women's Health/Nurse-Midwifery Clinical Practicum I</td>
</tr>
<tr>
<td>NURS 638</td>
<td>Nurse-Midwifery Intrapartum/Newborn Assessment and Management II</td>
</tr>
<tr>
<td>NURS 643</td>
<td>Women's Health/Nurse-Midwifery Clinical Practicum II</td>
</tr>
<tr>
<td>NURS 654</td>
<td>Advanced Practice Nursing: Primary Care I</td>
</tr>
<tr>
<td>NURS 658</td>
<td>Clinical Pharmacology for Advanced Practice Nursing</td>
</tr>
<tr>
<td>NURS 744</td>
<td>Women's Health/Nurse-Midwifery Assessment and Management III</td>
</tr>
<tr>
<td>NURS 745</td>
<td>Women's Health/Nurse-Midwifery Clinical Practicum III</td>
</tr>
<tr>
<td>Total Semester Units</td>
<td>36</td>
</tr>
</tbody>
</table>

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>

| Total Units | 12     |

**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>
</tr>
</tbody>
</table>

| Total Units | 6     |

**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 Clinical Practicum I</td>
<td>4</td>
</tr>
<tr>
<td>NURS 638</td>
<td>Nurse-Midwifery Intrapartum/Newborn Assessment and Management II</td>
<td>3</td>
</tr>
<tr>
<td>NURS 639</td>
<td>Women’s Health/Nurse-Midwifery Clinical Practicum II</td>
<td>4</td>
</tr>
<tr>
<td>NURS 645</td>
<td>Clinical Pharmacology for Advanced Practice Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 646</td>
<td>Women’s Health/Nurse-Midwifery Assessment and Management III</td>
<td>3</td>
</tr>
</tbody>
</table>

| Total Semester Units | 49     |

**Specialization in School Nursing (SIMS Code: 554633)**

Students admitted to the school nursing specialization within the community health nursing concentration will pursue a program of studies leading to a Master of Science in nursing degree and a school nurse services credential. In addition to the Master of Science degree curriculum, to receive the school nurse services credential, students must complete a three unit 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>

| Total Units | 12     |

**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 Nursing 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>
</tr>
</tbody>
</table>

| Total Units | 9     |

**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>

| Total Units | 19     |
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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 604A Theoretical and Research Bases of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 604B Theoretical and Research Bases of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 608 Nursing in the Health Care System</td>
<td>3</td>
</tr>
<tr>
<td>NURS 684 Information Systems for Nursing</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Concentration Courses</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

Specialization Courses
(SIMS Code: 554630)

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 501 Advanced Health Assessment and Health Promotion</td>
<td>3</td>
</tr>
<tr>
<td>NURS 501L Advanced Health Assessment and Health Promotion Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>NURS 610 Pathophysiology in Adults and the Elderly</td>
<td>3</td>
</tr>
<tr>
<td>NURS 658 Clinical Pharmacology for Advanced Practice Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 799A Thesis OR NURS 798 (Plan B)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Specialization Courses</strong></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>

Area of Concentration Courses
(SIMS Code: 554641)

Nursing Education Concentration
(SIMS Code: 554641)

Graduates of the nursing education concentration will be prepared for positions in academic and/or clinical settings within three areas of specialization: Adult Health, Maternal/Newborn, and Pediatric Nursing. Required courses for the concentration are as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 604A Theoretical and Research Bases of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 604B Theoretical and Research Bases of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 608 Nursing in the Health Care System</td>
<td>3</td>
</tr>
<tr>
<td>NURS 684 Information Systems for Nursing</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Semester Units</strong></td>
<td><strong>46</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 636, 638, 658, 744 (12 units)
3. Pediatric Nursing: NURS 601, 672, 798, CDF 537 or 560 (13 units)

Total units for Master of Science in Nursing with Concentration in Nursing Education:

1. Adult Health: 40 units
2. Maternal/Newborn: 39 units
3. Pediatric Nursing: 40 units
Nursing Leadership in Health Care Systems Concentration
(SIMS Code: 554645)

Required courses for the Master of Science degree with a concentration in nursing leadership in health care systems are as follows:

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 604A Theoretical and Research Bases of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 604B Theoretical and Research Bases of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 608 Nursing in the Health Care System</td>
<td>3</td>
</tr>
<tr>
<td>NURS 684 Information Systems for Nursing</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

Area of Concentration Courses

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 620 Foundations of Nursing Administration Practice</td>
</tr>
<tr>
<td>NURS 622 Quality Improvement and Program Evaluation in Nursing Systems Organization</td>
</tr>
<tr>
<td>NURS 624 Nursing Care Systems and Personnel Management</td>
</tr>
<tr>
<td>NURS 724 Nursing Systems Administration Practicum</td>
</tr>
<tr>
<td>NURS 725 Financial Management in Health Systems</td>
</tr>
<tr>
<td>NURS 726 Advanced Nursing Systems Administration Practicum</td>
</tr>
<tr>
<td>NURS 797 Research</td>
</tr>
<tr>
<td>NURS 799A Thesis OR NURS 798 (Plan B)</td>
</tr>
<tr>
<td><strong>Total Units</strong></td>
</tr>
</tbody>
</table>

School Nurse Services Credential

(Credential Code: 00600)

San Diego State University offers curricula leading to the School Nurse Services Credential. This authorizes the holder to serve as a school nurse. For information concerning the credential, the student is referred to the School of Nursing office, HT-58.

The School Nurse Services Credential has been approved by the Commission on Teacher Credentialing.

All applicants seeking admission to the School Nurse Services Credential program must be admitted to the university and accepted as a classified postbaccalaureate student. Satisfactory completion of the program requires an overall GPA of 3.0.

**Standards for Admission**

1. Baccalaureate degree in nursing or related field.
2. Current California Registered Nurse license.
3. Required admission and planning interview with program adviser.
4. Have a minimum cumulative grade point average of 3.0 on a 4.0 scale in undergraduate upper division courses.
5. One year experience as a registered nurse within five years of application.
6. Undergraduate community health nursing course.

Program

The following program elements are required of all health services credential candidates:

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 601 Assessment and Health Promotion of Children and Adolescents</td>
</tr>
<tr>
<td>NURS 631 Community Health Nursing Practicum</td>
</tr>
<tr>
<td>NURS 632 Community Health Nursing</td>
</tr>
<tr>
<td>NURS 670 School Nursing Management Practices</td>
</tr>
<tr>
<td>NURS 672 Primary Health Care of the School-Aged Child</td>
</tr>
<tr>
<td>NURS 674 Health Education for School Nurses</td>
</tr>
<tr>
<td>SPED 500 Human Exceptionality</td>
</tr>
<tr>
<td>Audiology: Three unit course selected with approval of adviser</td>
</tr>
<tr>
<td>Elective with approval of graduate adviser</td>
</tr>
<tr>
<td><strong>Total Units</strong></td>
</tr>
</tbody>
</table>

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](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>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 644 Program and Curriculum Development in Nursing Education</td>
</tr>
<tr>
<td>NURS 645 Teaching and Learning in Nursing Education</td>
</tr>
<tr>
<td>NURS 646 Nursing Education Practicum</td>
</tr>
<tr>
<td>Elective: Graduate level course with education emphasis selected with consent of adviser</td>
</tr>
</tbody>
</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 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

NURS 601. Assessment and Health Promotion of Children and Adolescents (4)
Three lectures and three hours of laboratory.
Prerequisites: Consent of school health credential adviser or graduate adviser or RN to BS adviser.
Assessing physical, emotional, psychosocial and mental health of children and adolescents from birth to 19 years in hospital and community settings. Strategies for individual and group assessment. Age-appropriate interview techniques. Health promotion modalities.

NURS 604A. Theoretical and Research Bases of Nursing (3)
Integration of theory and research in nursing. Focus on theory development, testing, and evaluation. Research process in nursing including design, analysis, and utilization for professional nursing practice.

NURS 604B. Theoretical and Research Bases of Nursing (3)
Prerequisite: Nursing 604A.
Integration of theory and research in nursing. Focus on research ethics, measurement, publishing, and grant writing in professional nursing practice.

NURS 608. Nursing in the Health Care System (3)
Nursing in a changing health care delivery system. Organizational, economic, political, and professional concepts relevant to design and delivery of nursing care.

NURS 610. Pathophysiology in Adults and the Elderly (3)
Prerequisite: Consent of graduate adviser.
Physiologic alterations associated with acute and chronic illness in adults and the elderly as a basis for primary prevention and medical and nursing interventions.

NURS 620. Foundations of Nursing Administration Practice (3)
Analysis of communication concepts appropriate to a variety of complex nursing and health care delivery systems.

NURS 622. Quality Improvement and Program Evaluation in Nursing Systems Organizations (3)
Evaluation theories and concepts within a nursing care delivery system and health care organization. Concepts of quality management, consistent with accreditation criteria and professional standards of practice.

NURS 624. Nursing Care Systems and Personnel Management (3)
Issues related to personnel resources, staff development, staff utilization and collective bargaining in health care agencies and nursing care systems.

NURS 631. Community Health Nursing Practicum (3)
Nine hours per week.
Experience working with individuals and families of a selected community group applying theoretical knowledge within framework of nursing process.

NURS 632. Community Health Nursing (3)
Prerequisites: Nursing 415, 415L, and admission to school nurse or nurse-midwife programs.
Community and needs assessments. Community participation and transcultural considerations. Grant writing, ethical dilemmas, evidence-based practice, program planning, staffing, budgeting, and evaluation.

NURS 634. Physiology of Pregnancy and Fetal Development (3)
Prerequisite: Nursing 604A.
Analysis of physiologic alterations during pregnancy and fetal development as a basis for advanced health assessment and interventions in the childbearing population.

NURS 635. Advanced Practice Nursing-GYN-Primary Care Practicum (2 or 4 or 6)
Supervised laboratory and clinical experiences providing gynecological, primary, and well woman 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 physiology, and development.

NURS 637. Women’s Health/Nurse-Midwifery Clinical Practicum I (2 or 4 or 6)
Six to 18 hours per week in consultation with adviser.
Prerequisite: Concurrent registration in Nursing 636.
Supervised laboratory and clinical experiences providing obstetrical, gynecological, primary, and well woman care throughout lifespan. Maximum credit six units.

NURS 638. Nurse-Midwifery Intrapartum/Newborn Assessment and Management (3)
Prerequisites: Nursing 636 and 637.
Assessment and management of women with emphasis on labor and birth, postpartum, and normal newborn.

NURS 639. Women’s Health/Nurse-Midwifery Clinical Practicum II (4 or 6)
Twelve to 18 hours per week in consultation with adviser.
Prerequisite: Concurrent registration in Nursing 638.
Clinical experiences in one or more of the following settings: gynecological, well women/family planning, primary care, obstetrics/prenatal, intrapartum, post-partum, and newborn care.

NURS 640. Principles of Nurse-Midwifery I (3)
Prerequisites: Nursing 604B, 608, 634, 635, 654, 658, 684. Concurrent registration in Nursing 641.
Comprehensive assessment and management of women throughout the childbearing cycle and interconceptional period, with emphasis on prenatal care, labor and delivery, postpartum and the normal newborn.

NURS 641. Certified Nurse-Midwifery Clinical Practicum I (6)
Prerequisites: Nursing 604B, 608, 634, 635, 654. Concurrent registration in Nursing 640.
Supervised laboratory and clinical experiences providing gynecological, well woman, primary obstetric, postpartum and newborn care for adolescent and adult women throughout the lifespan in diverse clinical settings.
NURS 644. Program and Curriculum Development in Nursing Education (3)
Prerequisite: Graduate standing. Role of nurse educators in academic and clinical settings including staff development and outcome evaluation. State, federal, and professional regulatory environment of nursing programs.

NURS 645. Teaching and Learning in Nursing Education (3)
Prerequisite: Credit or concurrent registration in Nursing 644. Classroom and clinical teaching strategies in nursing education. Measuring learning, item and examination construction, evaluation, designing written assignments and clinical evaluation tools, and working with challenging learners.

NURS 646. Nursing Education Practicum (3)
One hundred thirty-five hours of practicum over the semester. Prerequisite: Nursing 645. Theory related to practice while teaching in academic and/or clinical settings. Nurse educator activities across the spectrum to include committee work, classroom and clinical teaching and evaluation of learners.

NURS 654. Advanced Practice Nursing: Primary Care I (3)
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, 604A, 610. Primary health care of the child and adolescent with emphasis on common health problems, chronic illness, drugs, behavioral problems, and the battered child.

NURS 674. Health Education for School Nurses (3)
Prerequisite: Nursing 672. Prepares school nurse to be an active participant in school health education with emphasis on planning and presentation of health instructional material focused on disease prevention and health promotion.

NURS 684. Information Systems for Nursing (3)
Two lectures and three hours of laboratory. Information systems and information management in all aspects of nursing practice including client care, administration, research and education. Ethics of computer use and influence of information technology on client care. User skills.

NURS 696. Seminar in Selected Topics in Nursing (1-3)
Intensive study in specific areas of nursing. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

NURS 724. Nursing Systems Administration Practicum (3)
Nine hours of laboratory. Prerequisites: Nursing 622 and concurrent registration in Nursing 624. Provides observation and guided administrative experience specific to the role and function of the first level nurse manager in a selected health care system. Needs and individual objectives of the student are integrated into the experience.

NURS 725. Financial Management in Health Systems (3)
Prerequisite: Nursing 620 or Public Health 641 or 650. Health care economics, budget planning and management skills and financial analysis skills necessary to facilitate management decision making and writing business plans.

NURS 726. Advanced Nursing Systems Administration Practicum (3)
Nine hours of laboratory. Prerequisite: Nursing 724. Provides observation and guided administrative experience specific to the role and function of the executive level manager in a selected health care system. Individual needs and objectives of the student are integrated into the experience.

NURS 730. Advanced Community Health Nursing (3)
Prerequisite: Graduate standing. Community health assessment and analysis of community characteristics, including social, cultural and economic factors. Design of programs which meet the needs of particular ethnic groups and health aggregates for health promotion and disease prevention.

NURS 732. Advanced Community Health Nursing Practicum (3)
Prerequisite: Concurrent registration in Nursing 730. Leadership role and planning function of a community health nurse specialist in a selected community setting.

NURS 736. Seminar in Community Health Problems (3)
Prerequisite: Advancement to candidacy in health related disciplines. Interdisciplinary analysis of community based health practice problems.

NURS 741. Integrated Women’s Health/Nurse-Midwifery Clinical Practicum (2 or 4 or 6)
Prerequisites: Nursing 637 and 638. Supervised laboratory and clinical experiences (off campus) providing obstetrical, intrapartum, newborn, gynecological, primary and well woman care for adolescent and adult women throughout the lifespan in diverse clinical settings. Maximum credit six units.

NURS 742. Principles of Nurse-Midwifery II (3)
Prerequisites: Nursing 640, 641. Concurrent registration in Nursing 743. Expands concepts and principles applied to management of pathophysiological and psychological issues complicating the childbearing cycle and interconceptional 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)
Concurrent registration in Nursing 740. Supervised laboratory and clinical experiences providing gynecological, well woman, primary, obstetric, postpartum and newborn care for adolescent and adult women throughout the lifespan in diverse clinical settings and in complex situations.
NURS 744. Women’s Health/Nurse-Midwifery Assessment and Management III (3)
Prerequisites: Nursing 638. Concurrent registration in Nursing 745.
Theoretical concepts and principles applied to management of pathophysiological and psychological issues in women’s healthcare.
Contemporary issues in well women, gynecological, and primary care.

NURS 745. Women’s Health/Nurse-Midwifery Clinical Practicum III (4-6)
Twelve to 18 hours per week in consultation with adviser.
Prerequisite: Concurrent registration in Nursing 744.
Clinical experiences in one or more of the following settings: gynecological, well women/family planning, primary care, obstetrics/prenatal, intrapartum, post-partum, and newborn care.

NURS 751. Advanced Practice Nursing: Acute/Critical Care Theory and Technology (3)
Prerequisite: Consent of advanced practice nursing concentration chair.
Role of advanced practice nurse in acute/critical care settings. Problems and interventions with acutely and critically ill adults and elderly. Emphasis on research-based interventions, psychosocial responses, standards of practice, expanding technologies, and continuation of care to the home.

NURS 753. Advanced Practice Nursing: Acute and Critical Care Practicum (3)
Nine hours of laboratory.
Prerequisite: Concurrent registration in Nursing 751.
Care management activities of acute and critical care advanced practice nurse: research-based care of select adult and elderly clients and families; consultation in coordination of client care; interdisciplinary collaboration; evaluation of care based on standards of practice.

NURS 797. Research (1-3) Cr/NC/RP
Prerequisite: Advancement to candidacy.
Independent research in a specialized subject. Maximum six units applicable to a master’s degree.

NURS 798. Special Study (1-3) Cr/NC/RP
Prerequisite: Consent of instructor.
Independent study. Maximum credit six units applicable to a master’s degree. For students using Plan B, Comprehensive Examination is limited to three units.

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

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

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

In the School of Exercise and Nutritional Sciences
In the College of Professional Studies and Fine Arts

OFFICE: Exercise and Nutritional Sciences 351
TELEPHONE: 619-594-5541
http://ens.sdsu.edu

Faculty
Fred W. Kolakhorst, Ph.D., Professor of Exercise and Nutritional Sciences, Director of School
Mark J. Kern, Ph.D., Professor of Exercise and Nutritional Sciences
Larry S. Verity, Ph.D., Professor of Exercise and Nutritional Sciences (Graduate Adviser)
Donna L. Beshgetoor, Ph.D., Associate Professor of Exercise and Nutritional Sciences
Mee Young Hong, Ph.D., Associate Professor of Exercise and Nutritional Sciences

Associateships and Assistantships
Graduate teaching associateships are available for a limited number of qualified students. These provide essential education, technical training, and creative experience necessary for future professional and scholarly activity or college-level teaching. Graduate assistantships are also available in some cases to aid faculty research. Application blanks and additional information on graduate programs may be obtained from the School of Exercise and Nutritional Sciences Web site at http://ens.sdsu.edu.

General Information
The School of Exercise and Nutritional Sciences offers graduate study leading to the Master of Science degree in nutritional sciences and a concurrent graduate program leading to a Master of Science degree in nutritional science and M.S. degree in exercise physiology.

In order to be granted permission to enroll in coursework leading to completion of the didactic program in dietetics (accredited by the Commission on Accreditation for Dietetics Education), students admitted to the Master of Science degree program in nutritional sciences, or the dual degree program Master of Science in nutritional sciences and Master of Science in exercise physiology, must have completed all of the following (or equivalent courses) with a GPA of 3.6 or higher: Biology 100, 100L, 211, 211L, 336; Chemistry 100, 130, 160; and a statistics course (e.g. Psychology 270).

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

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

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

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

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

Master of Science Degree in Nutritional Sciences
Master of Science Degree in Nutritional Science and Master of Science Degree in Exercise Physiology

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

School of Exercise and Nutritional Sciences
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7251

(1) Two letters of recommendation;
(2) Statement of purpose (1-2 pages describing applicant’s background, research interests/experiences, and goals).

Master of Science Degree in Nutritional Sciences

General Information
For information regarding graduate coursework and research experience leading to a Master of Science degree in nutritional sciences, contact the adviser in the School of Exercise and Nutritional Sciences. The general program of study may include coursework in nutrition or food science. Thesis research in nutrition may be conducted using human subjects or experimental animals. Research activity of the faculty currently includes: nutritional status of children, elders, and ethnic groups; metabolic studies on cholesterol and energy balance; and factors affecting human lactation, body composition and obesity, athletic performance and fitness, composition of human milk and composition and stability of foods. Laboratories, including animal facilities and equipment, at SDSU support research conducted under the direct supervision of the nutritional sciences graduate faculty. In addition, students may conduct research at other facilities in the community in conjunction with collaborative studies pursued by nutritional sciences faculty and researchers at other institutions in San Diego.

Graduates with the M.S. degree in nutritional sciences are employed as administrators or service providers of community nutrition programs, food service supervisors, and community college educators, as well as, in administrative, research, or quality control positions within industry and government.

Admission to the Degree Curriculum
All students must satisfy the general requirements for admission to the university with classified graduate standing as described in Part Two of this bulletin. In addition, students must have bachelor's degrees in foods and nutrition or related fields and satisfy the prerequisites of the courses selected. If students' undergraduate preparation is deemed insufficient, students will be required to complete specified courses in addition to the minimum of 30 units required for the master's degree in nutritional sciences. Students must have a grade point average of 3.0 in the last 60 semester units attempted, and a minimum score of 950 and not less than 475 on either verbal or quantitative sections of the GRE General Test.

Students will be admitted ONLY in the fall semester. Submit applications no later than February 1.

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy as described in Part Four of this bulletin.
Specific Requirements for the Master of Science Degree

(Major Code: 13061) (SIMS Code: 662933)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete a graduate program of at least 30 units including at least 21 units from courses listed as acceptable to the master's degree program in nutritional sciences. At least 18 units must be in 600- and 700-numbered courses. Required courses include six units selected from Nutrition 606, 607, 608, 610; either Nutrition 600 or 700; and Exercise and Nutritional Sciences 601 and 602. Also, students complete their degree by choosing either Plan A or Plan B. In Plan A, all students will include Nutrition 799A (thesis) for completion of their degree, accompanied by final oral examination on the on the field of the thesis and on the implications of the thesis research for the broader field of nutritional sciences is also required. If students select Plan B, Exercise and Nutritional Sciences 790 (Directed Readings) is required for completion of the degree.

The school expects a student to complete the degree within seven years. Failure to complete the degree requirements within seven years will result in dismissal from the program.

Master of Science Degree in Nutritional Sciences and Master of Science Degree in Exercise Physiology

Admission to the Degree Curriculum

All students must satisfy the general requirements for admission to the university with classified graduate standing as described in Part Two of this bulletin. In addition, a student applying for admission to the concurrent program in nutritional science and exercise physiology must meet the following requirements.

1. A grade point average (GPA) of at least 3.0 in the last 60 units of coursework.
2. A bachelor's degree in foods and nutrition, exercise science, kinesiology, physical education, or related fields. Students will be required to complete or have equivalent preparation in Biology 212, 336, Chemistry 100, 130, 160, Nutrition 201, 302, 302L, and Exercise and Nutritional Sciences 303, 304, 304L, and an undergraduate statistics course.
3. A minimum score of 475 on each of the verbal and quantitative sections of the GRE General Test. Students will be admitted ONLY in the fall semester. Submit applications no later than February 1.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Four of this bulletin.

Specific Requirements for the Master of Science in Nutritional Sciences and Master of Science in Exercise Physiology

(Major Code: 08356) (SIMS Code: 662990)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete an officially approved course of study of not less than 48 units as outlined below. Also, students complete their degree by choosing either Plan A or Plan B. In Plan A, all students will include Nutrition 799A (thesis) or Exercise and Nutritional Sciences 799A (thesis) for completion of their degree, accompanied by a final oral examination on the field of the thesis and on the implications of the thesis research for the broader field of exercise and nutritional sciences. If students select Plan B, Exercise and Nutritional Sciences 790 (Directed Readings) is required for completion of the degree. If a student, after entering the concurrent program leading to a Master of Science degree in nutritional science and a Master of Science degree in exercise physiology returns to a single degree program, all the requirements for the single degree program must then be met.

The school expects the student to complete the degree requirements within seven years. Failure to complete the degree requirements within seven years will result in dismissal from the program.
Courses Acceptable on Master's Degree Programs (NUTR)

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

**UPPER DIVISION COURSES**

**NUTR 510. Nutrition and Community Health (3)**
- Two lectures and three hours of activity.
- Prerequisites: Grade of C or better in Nutrition 302, 302L, Nutrition 203, 304, and consent of instructor.
- Nutritional problems in the community with consideration of their resolution. Field placement experience required.

**NUTR 596. Advanced Studies in Nutrition (1-6)**
- Prerequisite: Nine upper division units in nutrition.
- Advanced study of selected topics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of nine units of 596. No more than six units of 596 may be applied to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

**GRADUATE COURSES**

**NUTR 600. Seminar: Foods and Nutrition (3)**
- Prerequisites: Nutrition 301, 302, and 302L.
- Introductory seminar of research and research publications in foods and nutrition.

**NUTR 606. Physiological Bases of Diet Therapy (3)**
- Prerequisite: Nutrition 406. Recommended: Chemistry 560.
- Dietary modifications, adjunct to medical treatment, used to prevent and alleviate the biochemical and physiological symptoms of disease.

**NUTR 607. Child Nutrition (3)**
- Prerequisites: Nutrition 302 and 302L.
- Nutrition, health, and biochemical growth in children. Conditions leading to malnutrition, prevention, and correction.

**NUTR 608. Geriatric Nutrition (3)**
- Prerequisites: Nutrition 302 and 302L.
- Biomedical and psychosocial aspects of aging that affect food habits, nutritional status, and nutrient needs of elders.

**NUTR 610. Nutrition and Energy (3)**
- Prerequisites: Nutrition 302, 302L, and 309.
- Methods for measurement of energy intake and expenditure assessment, factors which control food intake and energy expenditure, and examination of normal and specialized needs of energy requirements.

**NUTR 700. Seminar in Nutrition (3)**
- Prerequisites: Nutrition 302 and 302L.
- Reading and analyses of basic and applied research in nutrition.

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

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

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

**NUTR 799C. Comprehensive Examination Extension (0) Cr/NC**
- Prerequisite: Completion or concurrent enrollment in degree program courses.
- Registration required of students whose only requirement is completion of the comprehensive examination for the master’s degree. Registration in 799C limited to two semesters.
Oceanography and Marine Studies
Administered by the
Department of Geological Sciences

OFFICE: Geology/Mathematics/Computer Science 237
TELEPHONE: 619-594-5586
http://www.geology.sdsu.edu

Faculty Committee for Marine Studies
Todd W. Anderson, Ph.D., Professor of Biology,
Director of Coastal and Marine Institute
Richard M. Gersberg, Ph.D., Professor of Public Health
Stephen A. Schellenberg, Ph.D., Associate Professor of Geological Sciences

General Information
San Diego State University provides preparation for ocean-oriented careers by offering marine-related coursework, research opportunities and oceanographic experience within regular degree programs in the Departments of Biology, Chemistry and Biochemistry, Economics, Civil, Construction, and Environmental Engineering, Mechanical Engineering, Geography, Geological Sciences, and the Graduate School of Public Health. Degrees in general oceanography or marine studies are not offered by the university. However, a Master of Arts or Master of Science degree may be earned as an Interdisciplinary Studies major (see the appropriate section in this bulletin).

Specific courses in oceanography (listed below) are offered with the cooperation of faculty from the participating departments. Advanced coursework and research in geological and physical oceanography are conducted in the Geological Sciences Department. Advanced courses and research in biological oceanography, marine biology, marine botany, and marine zoology are in the Department of Biology. The major areas of research under the joint doctoral program in ecology include coastal marine ecology, estuarine ecology, and aquaculture. The Graduate School of Public Health also offers a Master of Science degree with a concentration in Environmental Health Science and a concentration in Toxicology with focus on water and soil contamination and management of hazardous wastes. Marine-related coursework and research are offered in the Departments of Economics, Geography and in the College of Engineering. Students who require advising in these areas should inquire at the Coastal and Marine Institute or the appropriate department.

The Coastal and Marine Institute coordinates work in the area of marine studies and provides special supporting services to the faculty, staff, and students which includes student advising, assistance in research and publication, and a boat operations and research diving program. The director of the Coastal and Marine Institute reports to the dean of the College of Sciences. The university also operates the Pacific Estuarine Research Laboratory for the study of estuarine and wetland ecology. (See the General Information section of this bulletin.)

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

Biology Courses (BIOL)
Adviser: Anderson
BIOL 515 Marine Invertebrate Biology (4)
BIOL 517 Marine Ecology (4)

Economics Course (ECON)
Adviser: Adler
ECON 696 Experimental Topics (3)*

Civil Engineering Courses (CIV E)
Adviser: Noorany
CIV E 632 Computational Hydraulics and Hydrology (3)
CIV E 641 Advanced Foundation Engineering (3)

Geography Courses (GEOG)
Adviser: Stow
GEOG 588 Intermediate Remote Sensing of Environment (4)
GEOG 670 Environmental and Resource Conservation Theory (3)
GEOG 770 Seminar in Environmental and Resource Conservation (3)

Geological Sciences Courses (GEOL)
Adviser: Schellenberg
GEOL 545 Descriptive Physical Oceanography (3)
GEOL 625 Paleocology (3)
GEOL 640 Geotectonics (3)

Public Health Courses (P H)
Adviser: Gersberg
P H 634 Environmental Protection (3)
P H 637 Mechanism of Toxicity (3)
P H 639 Water Quality Investigation (3)

* 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
Mark R. Wheeler, Ph.D., Associate Professor of Philosophy, Chair of Department
J. Angelo Corlett, Ph.D., Professor of Philosophy
Robert M. Francescotti, Ph.D., Professor of Philosophy
Darrel Moellendorf, Ph.D., Professor of Philosophy
Thomas S. Weston, Ph.D., Professor of Philosophy
Peter C. Atterton, Ph.D., Associate Professor of Philosophy
Steven L. Barbone, Ph.D., Associate Professor of Philosophy
(Graduate Adviser)
Deborah G. Chaffin, Ph.D., Associate Professor of Philosophy
Sandra A. Wawrytko, Ph.D., Associate Professor of Philosophy

General Information
The Department of Philosophy offers a program of graduate studies leading to the Master of Arts degree. The purpose of the MA program in philosophy is to provide students with rigorous advanced training in philosophical reasoning on philosophical topics. The program serves students who wish to go on to pursue a Ph.D. in philosophy or other areas of advanced study; who seek skill development for professional careers such as teaching, law, business, and public service; and who seek personal enrichment through disciplined reflection on important and profound philosophical questions.

Note bene: Anyone applying to do graduate work in philosophy with the hope of eventually teaching philosophy needs to be aware that there are currently many more candidates for positions in teaching philosophy than there are positions available.

Admission to Graduate Study
All students must satisfy the general requirements for admission to the university with classified graduate standing as described in Part Two of the Graduate Bulletin. To be considered for admission to the graduate program in the Department of Philosophy with classified status, an applicant must fulfill the following requirements:

1. All students must hold a baccalaureate degree from an accredited U.S. institution or equivalent degree. The degree should be in the field of philosophy.
2. A minimum grade point average of 3.3 in upper division work in philosophy with an overall minimum grade point average of 3.0 is required.

Conditional admittance: Unusually promising students who do not meet all the above requirements may be accepted into the program with conditional status. Students who are accepted conditionally with 12-23 units of upper division philosophy will be required to take additional units (beyond the 30 units required for the M.A. degree) to meet the minimum qualification of having earned 24 units of upper division philosophy before achieving classified standing. Applicants who have an overall grade point average of 2.85-2.99 and an average of 3.3 in upper division philosophy may be considered for conditional admittance.

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

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

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

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

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

Department of Philosophy
The following materials should be mailed or delivered to:
Department of Philosophy
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-6044

(1) A letter describing the applicant’s reasons for pursuing graduate study in philosophy.
(2) A sample of the applicant’s writing (about 2,000 words) that provides evidence of a capacity for careful analytic thought.
(3) Two letters of recommendation.
(4) An official report of a GRE score is required. The department has not set any minimum score to be achieved on the GRE, but the score along with all other materials will be taken into consideration in evaluating each application.

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy as stated in Part Four of the Graduate Bulletin.

In order to advance to candidacy in the philosophy M.A. program, every graduate student must demonstrate reading proficiency in a language other than English. Languages may include both the formal languages of logic and mathematics and natural languages other than English (as appropriate to one’s studies in philosophy). Students shall consult with the graduate adviser to determine which language is appropriate. Proficiency in a language shall be demonstrated by earning a grade of B or more in either (a) no fewer than two lower division courses in that language or (b) at least one upper division course in that language. All grades must be earned either while the student is a graduate student in the philosophy department or at an accredited college within five years prior to admission to the graduate program in philosophy. Appropriate examinations may be given when available.

To be advanced to candidacy, a student must have achieved and maintain an overall grade point average of 3.3.

SDSU GRADUATE BULLETIN 2011-2012
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 508. Existentialism (3)
Prerequisite: Six units in philosophy.

The philosophical aspects of existentialism. Major emphasis is on the diversity of thought within a common approach as this is shown in individual thinkers.

PHIL 510. Philosophy of Law (3)
Prerequisites: Three units from Philosophy 101, 102, or 103; and three units from philosophy or political science.

Philosophical and ethical investigation into nature of law, rights, liberty, responsibility, and punishment.

PHIL 512. Political Philosophy (3)
Prerequisites: Philosophy 101, 102 or 103. Selected aspects of the political structures within which we live, such as law, power, sovereignty, justice, liberty, welfare.

PHIL 521. Deductive Logic (3)
Prerequisite: Philosophy 110 or 120. Recommended: Philosophy 120.

Principles of inference for symbolic deductive systems; connectives, quantifiers, relations and sets. Interpretations of deductive systems in mathematics, science and ordinary language. Not open to students with credit in Mathematics 523.

PHIL 523. Theory of Knowledge (3)
Prerequisite: Six units in philosophy.

Philosophical analysis of knowledge, including conceptions of belief, justification, and truth.

PHIL 525. Metaphysics (3)
Prerequisite: Six units in philosophy.

Prominent theories of reality, e.g., realism and nominalism, materialism and idealism, teleology and determinism.

PHIL 528. Theory of Ethics (3)
Prerequisite: Six units in philosophy.

Advanced topics in ethical theory, including normative ethics and meta-ethics. May include historical or contemporary readings or both. Issues may include content of moral value, nature of moral judgment, and accounts of virtue and right action.

PHIL 531. Philosophy of Language (3)
Prerequisite: Six units in philosophy.

An introduction to theories of meaning for natural languages and formal systems; concepts of truth, synonymy and analyticity; related epistemological and ontological problems.

PHIL 533. Philosophy of Religion (3)
Prerequisite: Six units in philosophy.

Philosophical analysis of the nature and existence of God.

PHIL 536. Philosophy of Mind (3)
Prerequisite: Three upper division units in philosophy.

Prominent theories and arguments regarding relation between mind and body. Varieties of dualism considered along with major materialist rivals.

PHIL 537. Philosophy of Science (3)
Prerequisite: Six units in philosophy.

The basic concepts and methods underlying contemporary scientific thought. Contributions of the special sciences to a view of the universe as a whole.

PHIL 542. Philosophy of Art (3)
Prerequisite: Six units in philosophy.

The nature of aesthetic experience. Principal contemporary theories of art in relation to actual artistic production and to the function of art in society.

PHIL 543. Philosophy and Literary Theory (3)
Prerequisites: Three upper division units in philosophy and three upper division units in literature.

Relations between philosophy and literary discourse. Strategies of interpretation offered by major contemporary thinkers.

PHIL 555. Asian Philosophies (3)
Prerequisite: Philosophy 351 or Philosophy 353.

Dimensions of Asian philosophies, past and present. Encounter between Buddhism and post-modern science, contemporary Asian philosophers (“global gurus”) and their impact on non-Asian cultures, enigmatic notion of emptiness (sunya, wu). See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.

PHIL 575. A Major Philosopher (3)
Prerequisite: Six upper division units in philosophy.

The writings of one major philosopher. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to the major. Maximum credit six units applicable to a master’s degree.
PHIL 596. Selected Topics (3)
Prerequisite: Six upper division units in philosophy.
A critical analysis of a major problem or movement in philosophy. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of nine units of 596 applicable to the major in philosophy. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

PHIL 599. Special Study (1-3)
Prerequisites: Upper division or graduate standing and consent of instructor.
Directed individual study in philosophy on a theme or topic chosen in consultation with the instructor. Maximum credit six units. Maximum combined credit six units of Philosophy 599 and 798 applicable to the M.A. degree in Philosophy.

GRADUATE COURSES

PHIL 600. Seminar in the History of Philosophy (3)
Prerequisite: Twelve upper division units in philosophy.
A major philosopher, school, or problem. Their historical roots and subsequent historical significance. See Class Schedule for specific content. May be repeated with new content. Maximum credit nine units applicable to a master’s degree.

PHIL 610. Seminar in Philosophical Problems: Values (3)
Prerequisite: Twelve upper division units in philosophy.
Problems in such fields as ethics, politics, aesthetics. See Class Schedule for specific content. May be repeated with new content. Maximum credit nine units applicable to a master’s degree.

PHIL 620. Seminar in Philosophical Problems: Knowledge and Reality (3)
Prerequisite: Twelve upper division units in philosophy.
A problem or group of problems in metaphysics, epistemology and logic. See Class Schedule for specific content. May be repeated with new content. Maximum credit nine units applicable to a master’s degree.

PHIL 630. Seminar in Current Philosophical Issues (3)
Prerequisite: Twelve upper division units in philosophy.
Problems in current philosophical publications. See Class Schedule for specific content. May be repeated with new content. Maximum credit nine units applicable to a master’s degree.

PHIL 696. Seminar in Selected Topics (3)
Prerequisite: Twelve upper division units in philosophy.
Intensive study in specific areas of philosophy. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

PHIL 701. Seminar in Teaching Philosophy (3)
Prerequisite: Classified graduate standing in philosophy.
Critical thinking and writing skills to teach philosophy. Syllabus construction, teaching techniques, assessment, and outcomes measurement.

PHIL 796. Studies in Philosophy (1-3) Cr/NC
Prerequisites: An officially appointed examining committee and advancement to candidacy.
Preparation for the comprehensive examination for students taking the M.A. under Plan B. Maximum credit three units applicable to a master’s degree.

PHIL 798. Special Study (1-3) Cr/NC/RP
Prerequisites: Twelve upper division units in philosophy and consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units applicable to a master’s degree.

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

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

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

Physical Education
Refer to “Exercise Physiology” and “Kinesiology” in this section of the bulletin.
Physics
In the College of Sciences

OFFICE: Physics 131
TELEPHONE: 619-594-6240 / FAX: 619-594-5485
E-MAIL: physdept@sciences.sdsu.edu
http://www.physics.sdsu.edu

Faculty
Usha S. Sinha, Ph.D., Professor of Physics, Chair of Department
Jeffrey A. Davis, Ph.D., Professor of Physics, Director of Electro-Optics Program
Fred M. Goldberg, Ph.D., Professor of Physics
Calvin W. Johnson, Ph.D., Professor of Physics
Patrick J. Papin, Ph.D., Professor of Physics and Associate Dean for Academic Affairs of the College of Sciences
Alan R. Sweedler, Ph.D., Professor of Physics, Director of Center for Energy Studies, and Assistant Vice President for International Programs
Milton S. Torikachvili, Ph.D., Professor of Physics
Fridolin Weber, Ph.D., Professor of Physics (Graduate Adviser)
Matthew E. Anderson, Ph.D., Associate Professor of Physics
Arlette R.C. Bailon, Ph.D., Associate Professor of Physics
Michael W. Bromley, Ph.D., Associate Professor of Physics

Associateships
Graduate teaching associateships in physics are available to a limited number of qualified students. Application blanks and additional information may be secured from the chair of the department.

General Information
The Department of Physics offers graduate study leading to the Master of Arts degree in physics, the Master of Science degree in physics, and the Master of Science degree in radiological health physics.

The Master of Arts degree emphasizes broad training and intensive coursework. This is a non-thesis program designed to lead the student to a comprehensive final examination. Specific courses, in both pure and applied physics, are chosen to complement the background of the individual student and achieve the desired educational goals. The program is designed to provide students with university-level teaching experience and access to community college teaching positions.

The Master of Science degree emphasizes research experience in a chosen specialty. It is designed to augment the student's undergraduate training with a core curriculum of advanced courses, then followed by a period of research and preparation of a thesis. Thesis topics are encouraged in both pure and applied areas of physics. The program is designed to provide students with university-level teaching experience and access to community college teaching positions.

Modern experimental laboratories are available for student and faculty research in the areas of modern optics, holography, optical properties of solids, laser physics, solid-state physics, nuclear magnetic resonance, electron paramagnetic resonance, atomic physics, solar energy, nuclear, medical and health physics, and image processing. Theoretical programs are available in condensed matter physics, electricity and magnetism, laser physics, nuclear and astrophysics.

The Master of Science degree in radiological health physics is designed to train physicists in the use of radioactive materials and radiation-producing devices such as those used in hospitals and related medical facilities, colleges and universities, industry, public health services, nuclear power installations, the military, the Department of Energy, the Environmental Protection Agency, and the Nuclear Regulatory Commission. The program emphasizes techniques of radiation dosimetry, and instrumentation in addition to the fundamental physics of radiation production and protection.

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

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

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

Department of Physics
Master of Arts Degree in Physics
Master of Science Degrees in Physics
Master of Science Degree in Radiological Health Physics

The following materials should be mailed or delivered to:
Department of Physics
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1233

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

Master of Arts Degree and Master of Science Degree in Physics

Admission to the Degree Curriculum
All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. In addition, the undergraduate preparation in physics must have substantially satisfied the undergraduate requirements for the bachelor's degree in physics. (Refer to the General Catalog for a description of these majors.) If the student's undergraduate preparation is deficient, he/she will be required to take courses for the removal of the deficiency. These courses are in addition to the minimum of 30 units for the master's degree.
Advenement to Candidacy
All students must satisfy the general requirements for advancement to candidacy, as stated in Part Four of this bulletin, and satisfactory completion of Physics 604, 606, 608, and 610A.

Specific Requirements for the Master of Arts Degree in Physics
(Major Code: 19021) (SIMS Code: 777702)
In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Four of this bulletin. The student's graduate program must include Physics 604, 606, 608, and 610A. Eighteen additional units of 500-, 600- or 700-numbered electives must be selected with the approval of the Physics department graduate adviser. The Master of Arts degree in physics requires the completion of Plan B, a comprehensive written examination.

Specific Requirements for the Master of Science Degree in Physics
(Major Code: 19021) (SIMS Code: 777701)
In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Four of this bulletin. The student must complete a graduate program to include Physics 604, 606, 608, 610A, 707 (3 units) and 799A. Twelve additional units of 500-, 600- or 700-numbered electives must be selected with the approval of the Physics department graduate adviser. The student is required to pass a final oral examination on the thesis.

Master of Science Degree in Radiological Health Physics

Admission to the Degree Curriculum
All students must satisfy the general requirements for admission to the Division of Graduate Affairs with classified graduate standing, as described in Part Two of this bulletin under Admission to the Division of Graduate Affairs. In addition, the undergraduate preparation in biology, chemistry, mathematics, and physics must have substantially satisfied the undergraduate requirements for a baccalaureate degree in the life sciences or the physical sciences so that satisfactory progress can be made toward the master's degree. If the student's undergraduate preparation is deficient, he will be required to take courses for the removal of the deficiency. These courses are in addition to the minimum of 30 units for the master's degree.

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy, as described in Part Four of this bulletin.

Specific Requirements for the Master of Science Degree in Radiological Health Physics
(Major Code: 12251) (SIMS Code: 777768)
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must meet the following requirements:

1. The student must complete a graduate program to include Physics 560, 561, 564, and Biology 561. Eighteen additional units must be selected with the approval of the Physics department graduate adviser.

2. The thesis option (Plan A) requires the approval of the graduate adviser. Students in Plan A must include Physics 797 and Physics 799A in the 30-unit program, and are required to pass a final oral examination on the thesis. Students in Plan B (non-thesis option) are required to pass a comprehensive written examination.

Courses Acceptable on Master's Degree Programs in Physics (PHYS)
Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

UPPER DIVISION COURSES

PHYS 532. Condensed Matter Physics (3)
Prerequisite: Credit or concurrent registration in Physics 410.
Elastic, thermal, electric, magnetic and optical properties of solids. Introduction to the energy band theory of solids, with applications to semiconductors and metals.

PHYS 533. Experimental Techniques in Condensed Matter Physics (3)
One lecture and six hours of laboratory. Prerequisites: Physics 357 and credit or concurrent registration in Physics 532.
Experiments in various fields of condensed matter such as x-ray diffraction, Hall effect, superconductivity, and electron paramagnetic resonance.

PHYS 538. Polymer Science (3)
(Same course as Chemistry 538)
Prerequisites: Chemistry 200 or 202; and Chemistry 410B or Physics 360 or Mechanical Engineering 350 or 352.
Structure, synthesis, physical properties, and utilities of polymers.

PHYS 552. Modern Optics and Lasers (3)
Prerequisites: Physics 406 with minimum grade of C; credit or concurrent registration in Physics 400B.
Electromagnetic theory, matrix methods of optics, propagation of Gaussian beams, optical resonators, interaction of radiation and atomic systems, theory of laser oscillation, nonlinear optics, specific laser systems, optical detectors, applications of lasers in physics.

PHYS 553. Modern Optics Laboratory (3)
One lecture and six hours of laboratory. Prerequisites: Physics 357 with minimum grade of C; Physics 406 with minimum grade of C; credit or concurrent registration in Physics 552.
Experiments in various fields of modern optics such as holography, physics of lasers, Fourier transform spectroscopy, Raman spectroscopy, light modulation techniques, fiber optics, spatial filtering, diffraction grating spectroscopy, radiometry, and nonlinear optics.

PHYS 560. Radiological Physics and Dosimetry (3)
Prerequisite: Credit or concurrent registration in Physics 354.
Ionizing radiation fields, interactions of radiation with matter, cavity theory, external radiation dosimetry.

PHYS 561. Nuclear Instrumentation (3)
One lecture and six hours of laboratory. Prerequisites: Physics 311 and 560.
Radiation detection, measurement, and spectroscopy. Ionization chambers, GM and proportional counters, scintillation and semiconductor detectors, and thermoluminescent dosimetry.

PHYS 564. Nuclear Physics (3)
Prerequisite: Credit or concurrent registration in Physics 410.
Nuclear and elementary particle phenomena including nuclear structure, decay, and radioactivity. Nuclear reactions and devices. Experimental methods and applications.

PHYS 570. Relativity (3)
Prerequisites: Physics 354 and 400B.
Relative coordinates, Lorentz transformation, covariant 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; and credit or concurrent registration in Physics 400A.
Computer programming for numerical solution of problems in classical mechanics, electromagnetism, optics, and quantum mechanics. Use of Fortran and C programming languages and the UNIX operating system. Incorporation of standard subroutines for linear algebra and differential equations into student written programs.
PHYS 596. Special Topics in Physics (1-4)
Prerequisite: Consent of instructor.
Selected topics in classical and modern physics. May be repeated with the consent of the instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

PHYS 600. Seminar (1-3)
Prerequisite: Consent of instructor.
An intensive study in advanced physics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

PHYS 604. Electromagnetic Theory (3)
Prerequisite: Physics 400B. Electrodynamics, magnetic induction, and magnetostatics, Maxwell’s equations, electromagnetic waves and radiation, fields in macroscopic media, special relativity. (Formerly numbered Physics 604A.)

PHYS 606. Statistical Mechanics (3)

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)

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

PHYS 797. Research (1-3) Cr/NC/RP
Prerequisite: Consent of graduate adviser. Research in one of the fields of physics. Maximum credit six units applicable to a master’s degree.

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

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

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

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

Policy Studies in Language and Cross-Cultural Education
Refer to “Education” in this section of the bulletin.
Political Science
In the College of Arts and Letters

OFFICE: Nasatir Hall 103
TELEPHONE: 619-594-6244 / FAX: 619-594-7302

Faculty

Madhavi M. McCall, Ph.D., Professor of Political Science, Chair of Department
Mikhail A. Alexseev, Ph.D., Professor of Political Science
David V. Carruthers, Ph.D., Professor of Political Science
Lei Guan, Ph.D., Professor of Political Science
Dipak K. Gupta, Ph.D., Distinguished Professor of Political Science, Emeritus
Edward V. Heck, Ph.D., Professor of Political Science, Emeritus
Ronald F. King, Ph.D., Professor of Political Science
Farid Abdel-Nour, Ph.D., Associate Professor of Political Science
Brian E. Adams, Ph.D., Associate Professor of Political Science
Jonathan Graubart, Ph.D., Associate Professor of Political Science
C. Richard Hofstetter, Ph.D., Associate Professor of Political Science, Emeritus
Carole Kennedy, Ph.D., Associate Professor of Political Science
Kristen Hill Maher, Ph.D., Associate Professor of Political Science (Graduate Adviser)
Emanuelle G. Saccarelli, Ph.D., Associate Professor of Political Science
Ronnie D. Schreiber, Ph.D., Associate Professor of Political Science
Latha Varadarajan, Ph.D., Associate Professor of Political Science
Adam Branch, Ph.D., Assistant Professor of Political Science
Ahmet T. Kuru, Ph.D., Assistant Professor of Political Science

General Information

The political science graduate program emphasizes global diversity and the interdependence between American society and politics and other nations through its curriculum in the areas of international relations, comparative politics, American politics, and political theory and methods. The department offers courses that contribute to career development in various professions including teaching, research, and consulting. Students from nations throughout the world, students in other disciplines and majors, and students from diverse social and cultural backgrounds enroll in political science graduate courses.

This graduate program provides core courses and programs of study for three distinctive groups of students: (1) Academic career students intending to enter Ph.D. programs and to pursue careers in university or college faculty or as professional researchers. (2) Community career students pursuing a master’s degree to obtain or enhance current employment including teaching, work in public agencies, business, military, law enforcement, and holding elected or appointed office. (3) Self-development students, often mature adults, pursuing a master’s degree because they enjoy studying political science and politics. These students contribute breadth and sophistication of understanding and a wealth of diverse experience to graduate seminars.

Because of the diversity of student interests, the department offers three specializations in the M.A. program. The general political science specialization provides the fundamental theoretical and analytical skills for students seeking to expand their knowledge of politics as well as those intending to pursue doctoral degrees in political science or placement in an academic setting. The specialization in public policy prepares students for further advanced study in that field and provides the skills necessary for placement in non-academic careers in both the public and private sectors. It covers such areas of American public policy as immigration policy, urban policy, environmental policy, civil rights, and foreign policy. The public policy internship program places students in public and private sector positions that enhance applied

and theoretical knowledge. The specialization in international relations/ comparative politics supplies expertise to graduate students planning to obtain a Ph.D. degree in this field or intending to seek employment with an overseas focus.

One of the strengths of the advanced degree program in political science is the depth and breadth of resources available to the students. The department actively cooperates with the 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

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

### Department of Political Science

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

- Department of Political Science (Attention: Graduate Adviser)
- San Diego State University
- 5500 Campanile Drive
- San Diego, CA 92182-4427

1. Two letters of reference;
2. Personal statement.

### Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as stated in Part Four of this bulletin. In addition, students must complete the Empirical Theory and Methods sequence by fulfilling one of the following options:

1. POL S 515 and 516.
2. POL S 515. Pass an examination in statistics at the graduate level.
3. POL S 515. Pass a course in statistics equivalent to POL S 516.
4. POL S 515. Pass an examination in a language other than one’s native language and other than English at a level approved by the department.

### Specific Requirements for the Master of Arts Degree

**Major Code: 22071**

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the student will complete a program of study of 30 units of upper division and graduate courses as approved by the departmental graduate adviser. The program must include a minimum of 24 units in political science selected from courses listed below as acceptable on master’s degree programs. Political Science 515 and 516 and at least 18 units in 600- and 700-numbered courses, including Political Science 601, are required. Students who have previously completed Political Science 515 or 516, or the equivalent as determined by the graduate adviser, will enroll in such additional courses in political science as approved by the graduate adviser.

Students may choose either Plan A or Plan B as the culminating experience for the degree. Plan A requires the writing of a thesis and enrollment in Political Science 799A, Thesis. Plan B requires the completion of a comprehensive written and oral examination. In consultation with the graduate adviser, a student electing the Plan B option will form an examining committee consisting of a chairperson and two additional members from the political science faculty. The examination committee will prepare, administer, and grade the written examination testing the student’s general knowledge in the program of study. The oral portion of the examination will follow the committee’s review of the written examination.

Specific requirements for students selecting the general political science specialization are (SIMS Code: 115501):

1. POL S 515 Research Design and Analysis in Political Science (3)
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)

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) AND
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. POL S 603 Seminar in Theory and Method of Public Policy Analysis (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 658 Seminar in Post-Communist Political Systems (3)
   - POL S 661 Seminar in the Political Systems of the Developing Nations (3)
   - POL S 667 Seminar in Latin American Political Systems (3)
   - POL S 675 Seminar in International Relations (3)
   - POL S 676 Seminar in International Political Economy (3)
   - POL S 696 Seminar in Selected Topics in Political Science (3), with permission of the graduate adviser.

4. Plan A: Political Science 799A, Thesis, and six additional units of coursework at the 500 level or above that may include transfer courses or courses outside the department, with permission of the graduate adviser.

OR

5. Plan B: Comprehensive written and oral examination. One additional seminar chosen from those listed in item 3 above and six additional units coursework at the 500-level or above that may include transfer units or courses outside of the department, with permission of the graduate adviser.

Specific requirements for students selecting the specialization in public policy are (SIMS Code: 115560):

1. POL S 515 Research Design and Analysis in Political Science (3) AND
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. POL S 603 Seminar in Theory and Method of Public Policy Analysis (3)
5. POL S 796 Internship in Public Policy (3)
6. 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 675 Seminar in International Relations (3)
   - POL S 676 Seminar in International Political Economy (3)
   - POL S 696 Seminar in Selected Topics in Political Science (3), with permission of the graduate adviser.

6. Plan A: Political Science 799A, Thesis, and six additional units of coursework at the 500 level or above that may include transfer courses or courses outside the department, with permission of the graduate adviser.

OR

7. Plan B: Comprehensive written and oral examination. One additional seminar chosen from those listed in item 5 above and six additional units coursework at the 500-level or above that may include transfer units or courses outside of the department, with permission of the graduate adviser.

Specific requirements for students selecting the international relations/comparative politics specialization are (SIMS Code: 115551):

1. POL S 515 Research Design and Analysis in Political Science (3) AND
2. POL S 516 Statistics for Political Scientists (3), or its equivalent.
2. POL S 601 Seminar in the Scope and Method of Political Science (3)
3. POL S 655 Seminar in General Comparative Political Systems (3)
4. POL S 675 Seminar in International Relations (3)
5. Two graduate seminars chosen from among the following:
   POL S 651 Seminar in Migration and Border Politics (3)
   POL S 658 Seminar in Post-Communist Political Systems (3)
   POL S 661 Seminar in the Political Systems of the Developing Nations (3)
   POL S 667 Seminar in Latin American Political Systems (3)
   POL S 676 Seminar in International Political Economy (3)
   POL S 696 Seminar in Selected Topics in Political Science (3), with permission of the graduate adviser.
6. Plan A: Political Science 799A, Thesis, and six additional units of coursework at the 500 level or above that may include transfer courses or courses outside the department, with permission of the graduate adviser.
   OR
7. Plan B: Comprehensive written and oral examination. One additional seminar chosen from those listed in item 5 above and six additional units of coursework at the 500-level or above that may include transfer units or courses outside of the department, with permission of the graduate adviser.

Courses Acceptable on Master's Degree Program in Political Science (POL)

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

Field I: Political Theory

UPPER DIVISION COURSES

POL S 507. Marx and Marxism (3)
  Prerequisite: Three units in political theory.
  Marxism as an important tradition in political theory and with its history as a political movement. Theoretical and political debates in development of Marxism.

POL S 510. Contemporary Political Thought (3)
  Prerequisite: Political Science 301B or 302 or 305 or 406.
  Controversial questions and theoretical attempts to address them. Debates about justice, citizenship, and multiculturalism; as well as controversies over nature and scope of politics.

Field II: American Politics

UPPER DIVISION COURSES

POL S 530. Political Parties (3)
  Prerequisite: Political Science 102 or 320.
  The political party as a part of the process of government; party organization and activities; nominating and campaign methods; theories and functions of the party system; party responsibility. The functioning of political parties in the American political system. May include a substantial amount of material about foreign political systems.

POL S 531. Interest Groups and Political Movements (3)
  Prerequisite: Political Science 101 or 102.
  Pressure group activity, lobbies, mass movements; factors which explain origins and motivations of group behavior; votes, money, information, protest as political resources; theories of pluralism, power elite and mass society, class and ethnic politics. May include a substantial amount of material about foreign political systems.

POL S 533. Democracy in America (3)
  Prerequisite: Political Science 102 or 320.
  Quality and quantity of democratic experience in contemporary America. Construction of American regime, arrangement of power within that regime, expansion and contraction of citizen participation, and principles that Americans generally espouse.

POL S 535. Gender and Politics (3)
  Prerequisites: Political Science 101 and 102.
  How gender matters in understanding key political science concepts including democracy, public/private participation and representation. Women involved in political institutions as elected officials, activists, and policy makers from U.S. and comparative perspectives.

POL S 541. Special Problems in Public Law (3)
  Prerequisite: Three units selected from Political Science 346, 347A, 347B, or 348.
  Issues of contemporary relevance in the field of public law, examining legal, moral, and political implications. (Formerly numbered Political Science 454.)

Field III: Comparative Politics

UPPER DIVISION COURSES

POL S 555. Comparative Political Systems (3)
  Prerequisite: Political Science 103.
  An examination of selected political and governmental systems for purposes of comparative study and analysis to determine similarities, differences and general patterns and universals among political systems.

POL S 560. Comparative Public Policy (3)
  Prerequisite: Political Science 103 or 335.
  How political, social, and economic forces shape public policy in selected countries. Focus on policies related to minority and immigrant populations, environment, or poverty.

POL S 562. Religion and Politics in Comparative Perspective (3)
  Prerequisite: Political Science 103.
  Various types of relationships between contemporary states and religious institutions. Concepts and theories on religion and politics. Cases of state-religion interaction.

POL S 564. Environmental Politics in Global Perspective (3)
  Prerequisite: Upper division or graduate standing.
  Comparative examination of environmental politics and policy in major world regions. Considers environmental politics with related policy challenges of economic growth, equity, and social justice. Course content varies with regional focus.

POL S 565. Nations and Nationalism (3)
  Prerequisite: Upper division or graduate standing.
  Debates surrounding origins, meaning and future of nationalism, and its most common embodiment, the nation-state form. Theoretical analyses of phenomenon and empirical case studies. (Formerly numbered Political Science 408, 468.)

POL S 566. Political Change in Latin America (3)
  Prerequisite: Political Science 101 or 103.
  General pattern of politics and political development in Latin America with an emphasis on those features which condition domestic and foreign policy making.

POL S 567. Political Systems of Latin America (3)
  Prerequisite: Political Science 566.
  Domestic and international politics of selected Latin American states.

POL S 568. Mexican Politics (3)
  Prerequisite: Political Science 101 or 103.
  Principal factors in Mexican governmental decision making. Ideology, political groups, tactics of leaders and governmental structure.

Field IV: International Politics

UPPER DIVISION COURSES

POL S 575. International Relations of the Pacific Rim (3)
  Prerequisite: Political Science 362 or 375.
  Dynamics of conflict and cooperation among nations of the Pacific Rim. Stress on political and economics factors that shape interstate relations.

POL S 577. Principles of International Law (3)
  The function of law in the international community. The historical development of the ideas and rules of international law and their place in the modern diplomatic and legal structure.
Elective Courses

UPPER DIVISION COURSES

POL S 515. Research Design and Analysis in Political Science (3)
Prerequisite: Political Science 201.
Does not fulfill undergraduate capstone major requirement. Modeling and design of formal research projects. Theoretical underpinnings and logic of social science analysis. Issues in measurement and scaling. Introduction to testing, including elementary statistical analysis of behavioral data.

POL S 516. Statistics for Political Scientists (3)
Prerequisite: Political Science 201.
Does not fulfill undergraduate capstone major requirement. Basic concepts, theories, and methods that are utilized by political and other social scientists using statistics and microcomputers. Intermediate level introduction to statistical methods in political science.

POL S 596. Topics in Political Science (1-3)
Prerequisites: Upper division or graduate standing. Selected topics in political science. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596. Credit for 596 and 696 applicable to a master's degree, with approval of the graduate adviser.

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 extensive paper relating internship experience to theories of public policy.

POL S 797. Research in Political Science (3) Cr/NC/RP
Prerequisite: Consent of the department chair.
Research in political theory, political parties, comparative government, international relations, public law or American government.

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

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

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

POL S 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program courses.
Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.
Psychology
In the College of Sciences

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Faculty
Georg E. Matt, Ph.D., Professor of Psychology, Chair of Department
Nader Amir, Ph.D., Professor of Psychology
Catherine J. Atkins, Ph.D., Professor of Psychology and Associate Dean for Faculty Affairs of the College of Sciences
Donna Castañeda, Ph.D., Professor of Psychology
Thereasa A. Cronan, Ph.D., Professor of Psychology
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Sarah N. Mattson Weller, Ph.D., Professor of Psychology
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Judy S. Reilly, Ph.D., Professor of Psychology
Edward P. Riley, Ph.D., Distinguished Professor of Psychology
Dennis P. Saccuzzo, Ph.D., Professor of Psychology
James F. Sallis, Jr., Ph.D., Distinguished Professor of Psychology
Thomas R. Scott, Ph.D., Professor of Psychology
Jennifer D. Thomas, Ph.D., Professor of Psychology (Graduate Adviser)
Jean M. Twenge, Ph.D., Professor of Psychology
Jeffrey M. Conte, Ph.D., Associate Professor of Psychology
Thierry Devos, Ph.D., Associate Professor of Psychology
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Linda C. Gallo, Ph.D., Associate Professor of Psychology
Paul E. Gilbert, Ph.D., Associate Professor of Psychology
Scott C. Roesch, Ph.D., Associate Professor of Psychology
V. Robin Weersing, Ph.D., Associate Professor of Psychology
May Yeh, Ph.D., Associate Professor of Psychology
Susan M. Brasser, Ph.D., Assistant Professor of Psychology
Elizabeth D. Cordero, Ph.D., Assistant Professor of Psychology
Lisa Kath, Ph.D., Assistant Professor of Psychology
David M. Marx, Ph.D., Assistant Professor of Psychology
Pamela Moses, Ph.D., Assistant Professor of Psychology
Melody S. Sadler, Ph.D., Assistant Professor of Psychology
Sara J. Unsworth, Ph.D., Assistant Professor of Psychology
Allison A. Vaughn, Ph.D., Assistant Professor of Psychology

Associateships and Assistantships
Graduate teaching associateships and graduate assistantships in psychology are available to a limited number of qualified students. Application forms and further information may be obtained from the master’s program adviser, Department of Psychology.

General Information
A Master of Science degree program in applied psychology with a focus on industrial/organizational psychology or program evaluation is offered. A Master of Arts degree program with a specialization in physical and mental health research, developmental, behavioral and cognitive neuroscience, social/personality or learning and cognition is available for persons who expect subsequently to pursue a Ph.D. degree. For students currently enrolled in the Ph.D. program, an M.S. in clinical psychology is offered. In addition, the Department of Psychology, jointly with the Department of Psychiatry, University of California, San Diego, School of Medicine, offers an APA-accredited program of graduate study leading to the Doctor of Philosophy degree in clinical psychology with specialization in behavioral medicine, neuropsychology, or experimental psychopathology. A scientist-practitioner training model serves as a guide for the experiences provided for doctoral students. It is expected that graduates of this program will be prepared to serve as scientists, innovators, and leaders in the field of clinical psychology. These programs can prepare students for teaching careers.

The doctoral program requires that students spend a minimum of five calendar years in study and research. In the first four years, doctoral students must complete their prescribed coursework satisfactorily as well as engage in research and a series of clinical practica. In the last year of the program all students must complete a 12-month APA-accredited clinical internship.

The department has a strong scientific research orientation, and emphasizes the master’s degree as preparation for doctoral work. Students in all programs must take an advanced statistics/experimental design course sequence and produce an empirical research thesis. The department awards approximately 30 master’s degrees annually. A substantial proportion of the graduates who apply go on to enroll in doctoral work at well-known universities.

The clinical psychology faculty staff a Psychology Clinic for graduate clinical training and service to the metropolitan San Diego community.

Admission to Master's and Doctoral Study
Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee.

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

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

(1) Official transcripts (in sealed envelopes) from all post-secondary institutions attended;
Note:
• Students who attended SDSU need only submit transcripts for work completed since last attendance.
• Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.
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 packet 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 of the department’s graduate committee, students may take up to six units of the required 30 units in 500-level and above courses in other departments.

All new Master of Arts degree students are required to take one unit of Psychology 600 during their first semester and another unit during their second semester.

Specific Requirements for the Master of Science Degree

(Major Code: 20011) (SIMS Code: 778301)

The Master of Science degree may be obtained with the following concentrations:

1. The Applied Psychology program has two specializations: Program Evaluation and Industrial and Organizational Psychology.

Specific requirements for students selecting the Program Evaluation specialization (SIMS Code: 778303) are: A minimum of 38 units, 32 of which must be completed in psychology, to include Psychology 670A-670B or 770A-770B, 600 (Research Orientation, 2 units), 621 or 622, 630, 675, 730, 791 (Internship in Applied Psychology, 6 units), and 799A (Thesis). Of the nine units of graduate electives required, at least three must be selected from psychology; six units of graduate electives may be selected from other departments with prior approval of the master’s program adviser.

Specific requirements for students selecting the Industrial and Organizational specialization (SIMS Code: 778304) are: A minimum of 38 units, 35 of which must be completed in psychology, to include Psychology 670A-670B or 770A-770B, 600 (Research Orientation, 2 units), 621, 622, 630, 675, 721, 722, 792 (Internship in Industrial and Organizational Psychology, 6 units), and 799A (Thesis). Three units of graduate electives may be selected from psychology or from other departments with prior approval of the master’s program adviser.

2. Clinical Psychology (included within the Ph.D. program; not available separately).

(Major Code: 20031) (SIMS Code: 778309)

A minimum of 36 units in psychology, including Psychology 770A-770B, 801, 820, 840, 849, 850, 855, 856, 860 or University of California, San Diego, SOMC 205, Clinical Neuroanatomy or CLIN 205, 896 (Clinical Practicum, minimum 3 units), and one course to be taken at the University of California, San Diego, SOMC 202E. Completion of the second year project and approval by a committee consisting of a minimum of three faculty members representing both SDSU and UCSD. For this degree only, all approvals and advancement to candidacy will be completed by the program director of the joint doctoral program.
Specific Degree Requirements for the Doctor of Philosophy Degree in Clinical Psychology

The student is guided by requirements for the doctoral degree program given in Part Four of this bulletin. The core curriculum will normally be completed during the first two years. Completion of this core insures that students have a general background in empirical psychology (e.g., physiological, social, cognitive-affective, and individual bases of behavior); knowledge of conceptualizations of personality and psychopathology; an awareness and appreciation of professional ethics and conduct; awareness and appreciation of multicultural issues in an increasingly multicultural society; knowledge of the theory and techniques of psychological assessment; knowledge of therapeutic interventions, acquisition of therapeutic skills, and a minimum of 1,000 hours of supervised clinical experience; and competence in research methods. Specific courses providing this background at SDSU include Psychology 770A-770B, 775, 801, 820, 840, 849, 855, 856, 860 (or UCSD Clinical Psychology 205 [Neuroanatomy]), 896, and UCSD Clinical Psychology 202E (Psychopathology).

During the second year, students will select a research topic for a second year project, which is similar to a master’s thesis. Students are responsible for conducting all phases of this project under the supervision of their joint guidance committee. Students may also elect to obtain a master’s degree by completing requirements for the Master of Science degree.

After completing the basic two-year core, work in subsequent years will diverge for students in each of the three specialty areas: behavioral medicine, experimental psychopathology, and neuropsychology. All students must take the one-unit seminar in neuropsychology.

Students specializing in behavioral medicine are required to take Psychology 842 (Behavioral Medicine Seminar: Assessment) and Psychology 843 (Behavioral Medicine Seminar: Intervention), typically in the third year. Students taking experimental psychopathology are required to take Psychology 833 (Seminar in Developmental Psychopathology) and 852 (Seminar in Experimental Psychopathology Research), typically in the third year. Students in neuropsychology are required to take UCSD Clinical Psychology 205 (Neuroanatomy) and UCSD Clinical Psychology 294 (Seminar in Neuropsychology).

In the fourth year, students are expected to submit and defend a dissertation proposal. Many students will also collect the data for and begin writing the dissertation during this year.

The fifth year is reserved for the completion of a doctoral dissertation and a full-time clinical internship that is identified by the student and the joint guidance committee. Students are expected to maintain the highest standards of academic performance. Students must maintain a minimum 3.0 grade point average. According to doctoral program policy, falling below a 3.0 GPA automatically places a student on academic probation. A student may not remain on academic probation for more than one year. In addition, three grades below a B (i.e., a B– or lower or No Credit) are grounds for dismissal from the program without further qualification regardless of a student’s overall GPA.

In clinical psychology, adherence to the Ethical Principles of Psychology (APA, Revised, 2003) is mandatory. Students who knowingly or unknowingly violate any part of the ethical code may be dismissed from the program without further qualification regardless of coursework, research, or other academic achievement. A copy of the ethical code is distributed to students at their initial orientation.

Prior to advancement to candidacy, students will be required to sign a statement of understanding that 1) the doctoral faculty will communicate with the clinical internship agency all information relevant to the student’s academic and professional qualifications for placement and continuation in the internship and 2) the student understands that the clinical internship must be satisfactorily completed before graduation.

Faculty
The following faculty members of the cooperating institutions participate in the joint doctoral program in clinical psychology and are available for direction of research and as members of joint doctoral committees.

San Diego State University:
Program Director: Klontoff

University of California, San Diego:
Program Director: Heathen

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 the bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

UPPER DIVISION COURSES

PSY 501. History of Psychology (3)
Prerequisite: Limited to graduate students or psychology majors with senior standing.
Historical background of modern psychology.

PSY 561. Advanced Neuropsychology (3)
Prerequisite: Psychology 360 or 361 or grade of B or better in Psychology 260.
Biological bases of neuropsychological function and dysfunction, relationships between brain structure and function, neuropsychological assessment tools.

PSY 587. Advanced Principles of Learning and Cognition (3)
Prerequisites: Psychology 211, 280, and 380. Limited to graduate students or psychology majors with senior standing.
Empirical data, basic principles and theoretical positions of major theorists in learning and cognitive psychology.

PSY 596. Selected Topics in Psychology (1-3)
Prerequisites: Psychology 101 and consent of instructor.
Intensive study in specific areas of psychology. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 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.

GRADUATE COURSES

NOTE: Graduate courses in psychology are not open to post-baccalaureate unclassified students.
NOTE: Priority for enrollment in graduate courses in psychology is given to psychology students who have the courses as requirements in their respective programs.

PSY 600. Research Orientation (1) Cr/NC
Prerequisite: Admission to the master’s degree program.
Research in psychology. All master’s degree students are required to enroll in this course. Maximum credit two units.

PSY 610. Advanced Research Methods in Psychology (3)
Prerequisite: Admission to the master’s degree program.
Diverse research methods across different areas of psychology. Interdependence of theory and methodology in research to include design, measurement, and validity.
PSY 621. Seminar in Personnel Psychology (3)  
Prerequisites: Psychology 320 and consent of master’s program adviser.  
Problems and procedures in selection, classification, and performance appraisal, focusing on testing in industry, the interview, and other selection and assessment devices. Criterion development and measurement methods.

PSY 622. Seminar in Organizational Psychology (3)  
Prerequisites: Psychology 321 and consent of master’s program adviser.  
Applications of psychological principles and methods of investigation to problems of industrial relations and motivation of employees; factors influencing morale and employee productivity; criteria of job proficiency; psychological aspects of worker-management relationships and leadership.

PSY 630. Seminar in Program Evaluation (3)  
Prerequisite: Graduate standing in psychology.  
Theory and practice of program evaluation. Surveys concepts, issues, and methods relevant to evaluating programs, services, and interventions in the public and private sectors.

PSY 632. Theories and Methods in Developmental Psychology (3)  
Prerequisite: Psychology 331 or 332.  
Philosophical and biological origins of developmental psychology. Examination of processes that shape perception, language acquisition, socialization, and cognition.

PSY 651. Seminar in Behavior Disorders of Childhood and Adolescence (3)  
Prerequisites: Psychology 350 and consent of master’s program adviser.  
Contemporary approaches to emotional and behavioral problems of childhood and youth. Considers developmental, cognitive and social variables as well as theory and treatment.

PSY 670A-670B. Advanced Statistics in Psychology (3-3)  
Two lectures and two hours of activity.  
Prerequisites: Psychology 370, 410, a passing score on the departmental statistics placement test, and consent of master’s program adviser.  

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 754. 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 757. Seminar in Selected Topics in Clinical Psychology (1-3)  
Prerequisite: Consent of master’s program adviser.  
In-depth examination of a selected aspect of clinical psychology. 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.  
Problems and procedures in 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 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 independence of experimental design and statistical evaluation of results. General linear model in its regression and ANCOVA formulations. Advanced multiple regression and correlation techniques using computer-based statistical packages.

PSY 775. Multivariate Statistics in Psychology (3)
Two lectures and two hours of activity.
Prerequisites: Psychology 670A-670B or 770A-770B and consent of instructor.
Introduction to multivariate techniques. Latent structure models with attention to relationship between latent constructs and observable data. Includes causal models, factor analysis (both exploratory and confirmatory), canonical correlation, path analysis, discriminant function analysis, and loglinear analysis.

PSY 790. Practicum in the Teaching of Psychology (1) Cr/NC/RP
Prerequisite: Award of a graduate teaching associateship in psychology.
Supervision in the teaching of psychology, covering lecture writing, style of lecture presentation, in-class demonstration and exercise, test and syllabi construction, and grading system. Not applicable to an advanced degree.

PSY 791. Internship in Program Evaluation (1-6) Cr/NC/RP
Up to 20 hours of supervised work per week in a program approved internship setting.
Prerequisites: Psychology 630 and consent of instructor.
Supervised training in program evaluation in a program approved internship setting. Maximum credit six units.

PSY 792. Internship in Industrial and Organizational Psychology (1-6) Cr/NC/RP
Up to 20 hours of supervised work per week in a program approved internship setting.
Prerequisites: Consent of instructor. Credit or concurrent registration in Psychology 621 and 622.
Supervised training in industrial and organizational psychology in a program approved internship setting. Maximum credit six units.

PSY 796. Selected Topics in Psychology (3)
Prerequisites: Advanced master’s and doctoral standing in psychology.
Intensive study in specific areas of psychology. Includes in-depth investigation of controversial issues in the field as well as introduction to current and emerging technologies. Examples include cognitive neuroimaging, cognition and social perception, etc. Maximum combined credit of six units of 696 and 796 applicable to a master’s degree.

PSY 797. Research (1-3) Cr/NC/RP
Prerequisite: Consent of master’s program adviser.
Research in one of the fields of psychology. Maximum combined credit of six units of 797 and 798 applicable to a master’s degree.

PSY 798. Special Study (1-3) Cr/NC/RP
Prerequisite: Consent of master’s program adviser.
Individual projects involving library or laboratory research in any area of psychological investigation or interest. Maximum credit of six units of 797 and 798 applicable to a master’s degree.

PSY 799A. Thesis (3) Cr/NC/RP
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master’s degree. Credit is contingent upon acceptance of the completed thesis by the Department of Psychology.

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

DOCTORAL COURSES

PSY 801. Seminar in History and Ethics in Psychology (3)
Prerequisite: Admission to doctoral program in clinical psychology.
Historical background of modern psychology; in-depth examination of the American Psychological Association code of ethics and its application to the conduct of clinical psychologists.

PSY 820. Seminar in Cultural Psychology (3)
Prerequisite: Admission to doctoral program in clinical psychology.
Cultural origins of human behavior; cultural limits of psychological knowledge.

PSY 833. Seminar in Developmental Psychopathology (3)
Prerequisite: Admission to doctoral program in clinical psychology.
Research and theory in biological and social origins of psychopathology. Methods of assessing developmental change and stability, issues related to vulnerability and resiliency, developmental appropriateness of approaches to interventions, and role of culture as a developmental context.

PSY 840. Seminar in Personality and Social Psychology (3)
Prerequisite: Admission to doctoral program in clinical psychology.
Research and theory in personality and social psychology. Theories of personality and individual differences, group processes, sex roles, social perception, and cross-cultural issues.

PSY 842. Behavioral Medicine Seminar: Assessment (3)
Prerequisite: Admission to doctoral program or approval by instructor and program director.

PSY 843. Behavioral Medicine Seminar: Intervention (3)
Prerequisites: Admission to doctoral program and Psychology 842.
Design and implement interventions by stressing empirically supported approaches to improve health and change health behaviors. Strengths and weaknesses of clinical community interventions.

PSY 849. Seminar and Laboratory in Counseling and Psychotherapy (4)
Two lectures and six hours of laboratory.
Prerequisite: Consent of graduate adviser.
Supervised practice in application of psychotherapeutic and counseling techniques from selected cognitive, dynamic, interpersonal, and behavioral approaches. Open only to students accepted in the doctoral program.

PSY 850. Seminar in Theory and Practice in Clinical Interventions (3)
Prerequisite: Admission to doctoral program in clinical psychology.
Theory and application of clinical interventions, advanced study of interviewing techniques, behavioral interventions, cognitive-behavioral interventions, and family/child interventions.

PSY 852. Seminar in Experimental Psychopathology Research (3)
Prerequisite: Admission to doctoral program in clinical psychology.
Analysis of experimental and theoretical literature as it pertains to research methodology for the study of disordered behavior.

PSY 855. Seminar in Psychological Assessment I (4)
Two lectures and six hours of laboratory.
Prerequisites: Psychology 350, 370, and consent of graduate adviser.
Theory and practice in assessment of intelligence and special abilities. Open only to students accepted in the doctoral program.
PSY 856. Seminar in Psychological Assessment II (4)
  Two lectures and six hours of laboratory.
  Prerequisites: Psychology 855 and consent of graduate adviser.
  Theory and practice in assessment of special abilities, personality and behavior disorders. Open only to students accepted in the doctoral program.

PSY 860. Seminar in Physiological Foundations of Behavior (3)
  Prerequisite: Admission to doctoral program in clinical psychology.
  Research and theory in physiological psychology. Advanced study of biological rhythms, sleep and waking, stress responses, the neurophysiology of learning and memory, and research methods in physiological psychology.

PSY 875. Advanced Multivariate Statistics (3)
  Two lectures and two hours of activity.
  Prerequisites: Admission to the doctoral program in clinical psychology, Psychology 770A-770B, and consent of instructor.
  Use of multivariate techniques. Relationship between latent constructs and observable data. Analyses such as causal models, exploratory and confirmatory factor analysis, canonical correlation, path analysis, discriminant function analysis, loglinear analysis, and hierarchical linear modeling using computer-based statistical packages.

PSY 886. Selected Topics in Psychology for Doctoral Program (1-4)
  Prerequisites: Admission to doctoral program, post-doctoral standing in psychology or a related field, and consent of instructor.
  Intensive study in specific areas of psychology for the doctoral program. Maximum combined credit of six units of 796 and 886 applicable to a doctoral program.

PSY 894. Clinical Internship (3-15) Cr/NC/RP
  Prerequisites: Completion of coursework, second year project, and advancement to candidacy.
  Clinical training in an APA-approved internship setting.

PSY 895. Practicum in the Teaching of Psychology (1-6) Cr/NC
  Prerequisite: Admission to doctoral program in clinical psychology.
  Supervision in the teaching of psychology, covering lecture writing, style of lecture presentation, in-class demonstration and exercises, test and syllabi construction, and grading systems.

PSY 896. Clinical Practicum (1-15)
  Prerequisite: Admission to the doctoral program.
  Supervision of advanced intervention strategies applied to clinical populations.

PSY 897. Doctoral Research (1-15) Cr/NC/RP
  Prerequisite: Admission to the doctoral program.
  Independent investigation in the general field of the dissertation.

PSY 898. Doctoral Special Study (1-8) Cr/NC/RP
  Prerequisite: Admission to the doctoral program.
  Individual study in the field of specialization. Maximum credit eight units applicable to the doctoral degree.

PSY 899. Doctoral Dissertation (1-15) Cr/NC/RP
  Prerequisites: An officially constituted dissertation committee and advancement to candidacy.
  Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.
Public Administration

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

OFFICE: Professional Studies and Fine Arts 100
TELEPHONE: 619-594-6225 / FAX: 619-594-1165

Faculty

Louis M. Rea, Ph.D., Professor of Public Affairs, Interim Director of
School (M.P.A. Graduate Coordinator)
Roger W. Caves, Ph.D., Professor of Public Affairs
James A. Gazell, Ph.D., Professor of Public Affairs
Lawrence A. Herzog, Ph.D., Professor of Public Affairs
(M.C.P. Graduate Coordinator)
Darrell L. Pugh, Ph.D., Professor of Public Affairs
L. Paul Sutton, Ph.D., Professor of Public Affairs
Jeffrey S. McIlwain, Ph.D., Associate Professor of Public Affairs
Dana M. Nurge, Ph.D., Associate Professor of Public Affairs
(M.C.J.C. Graduate Coordinator)
Sherry Ryan, Ph.D., Associate Professor of Public Affairs
Robert L. Stock, Ph.D., Associate Professor of Public Affairs
Maurizio Antoninetti, Ph.D., Assistant Professor of Public Affairs
Salvador Espinosa, Ph.D., Assistant Professor of Public Affairs
Shawn T. Flanigan, Ph.D., Assistant Professor of Public Affairs
Alan C. Mobley, Ph.D., Assistant Professor of Public Affairs

General Information

The School of Public Affairs offers graduate study leading to the
Master of Public Administration degree. Research facilities provided
include the Institute of Public and Urban Affairs and the Public Admin-
istration 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 Adminis-
tration. 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 require-
ments: (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 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) English language score, if medium of instruction was in a
language other than English (http://www.ets.org, SDSU
institution code 4682).

School of Public Affairs

The following materials should be mailed or delivered to:

School of Public Affairs
Master of Public Administration
(Attention: Dr. Louis M. Rea)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4505

(1) Two letters of reference from individuals who have known the
student’s academic work and/or employment performance.

Advancement to Candidacy

All students must meet the general requirements for advancement
to candidacy, as described in Part Four of this bulletin and be
recommended by the faculty. In order to be recommended for
advancement, a student must have achieved a grade point average of
3.0 in Public Administration 600 and three additional courses from
among Public Administration 604, 605 or 606, 630, 642, 650, 660, with
no grade below B–.
Specific Requirements for the Master of Public Administration Degree

(Major Code: 21021) (SIMS Code: 666901)

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Four of this bulletin. Students must also complete as a part of their programs: (1) at least 27 units of 600- and 700-numbered courses including Public Administration 600, 604, 605 or 606, 630, 642, 650 and 660; (2) a minimum of nine additional units of 500 level or graduate courses in public administration or related fields selected under advisement. An internship of 12 units (one semester) beyond the 36 units of coursework is required of students who have not had equivalent experience. The internship normally will be served in a governmental agency where the intern will perform administrative duties. Placements typically will be made in the office of a city manager, a budget office, a personnel office or in the office of the head of a major operating department. Public Administration 799A, Thesis, must be included in the program unless Plan B with a comprehensive written examination in lieu of the thesis is selected by the student with the approval of a graduate adviser; and (3) Students who specialize in Public Personnel and Labor Relations must take Public Administration 530, 531, 632, and 643.

Concentration in Criminal Justice Administration

(Major Code: 21051) (SIMS Code: 666926)

Students must complete 15 units from the following courses as part of the M.P.A. degree:

- CJ 601 Seminar in the Administration of Criminal Justice (3)
- CJ 602 Seminar in Comparative Criminal Justice System (3)
- CJ 603 Seminar in Community and Restorative Justice (3)
- CJ 604 Seminar in Criminal Justice and Urban Administration (3)
- CJ 605 Seminar in Juvenile Justice and Youth Violence (3)

Concentration in City Planning

(Major Code: 02061) (SIMS Code: 666918)

Students must complete the following courses as part of the M.P.A. degree:

- PA 525 The U.S. City Planning Process (3)
- CP 630 Seminar in Urban Planning Implementation (3)
- CP 640 Seminar in Urban Planning Theory (3)
- CP 670 History of Urban Planning (3)
- CP 690 Seminar in Land Use Planning Principles and Techniques (3)

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

General Information

The School of Public Affairs and the Center for Latin American Studies offer a concurrent graduate program leading to a Master of Public Administration and a Master of Arts in Latin American Studies. This concurrent degree program offers students preparation in the fields of public administration and Latin American studies for the purpose of public administration in fields requiring bi-national understanding of administration in the public sector.

If a student in the concurrent graduate program returns to a single degree program, none of the provisions of the concurrent degree program shall pertain. Transfer units will not be accepted towards the concurrent degrees, nor will previous graduate study or prior degrees be accepted toward meeting the unit requirements.

Admission to the Degree Curriculum

All students must satisfy the general requirements for admission to the university with classified graduate standing as described in Part Four of this bulletin. The successful applicant will also satisfy the requirements for both the Master of Public Administration and the Master of Arts in Latin American Studies. To be admitted to the program, students must have (1) a 3.0 grade point average in the undergraduate major and 2.85 overall and (2) an acceptable score on the Graduate Record Examination (GRE) General Test. Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee as described in Part Four of this bulletin.

The following materials should be mailed or delivered to:

- Center for Latin American Studies
- San Diego State University
- 5500 Campanile Drive
- San Diego, CA 92182-6038

(1) Personal statement;
(2) Three letters of reference from individuals who have known the student's academic performance (one letter may be from an individual who knows the employment performance of the student).

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin and be recommended by the graduate advisers of both programs. In addition, all students must (1) complete Public Administration 600 and three additional courses selected from Public Administration 604, 605 or 606, 642, 650, 660; (2) complete Latin American Studies 600 and 601; (3) achieve a grade point average of 3.0 in these courses with no grade below B-; (4) satisfactorily complete Spanish 201 and 202, or Portuguese 201, or their equivalents, or pass the American Council of Teachers of Foreign Language (ACTFL) oral proficiency examination in either Spanish or Portuguese with a score of 2.0 or above; (5) demonstrate international experience in Latin America through an approved study abroad or an international internship experience, or successful completion of Latin American Studies 550, an approved study abroad experience course.

Specific Requirements for the MPA/MA Degree

(Major Code: 21020) (SIMS Code: 666905)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete an officially approved course of study consisting of 54-66 units as outlined below.

1. Complete the following core of eight courses (24 units):
   - PA 600 Scope of Public Administration (3)
   - PA 604 Methods of Analysis in Public and Urban Affairs (3)
   - PA 630 Seminar in Public Personnel Administration (3)
   - PA 642 Seminar in Administrative Theory (3)
   - PA 650 Seminar in Public Financial Management (3)
   - PA 660 Administration and Public Policy Development (3)
   - LATAM 600 Seminar in Latin American Studies (3)
   - LATAM 601 Seminar on Methodology of Latin American Studies (3)

2. Complete one of the following courses (3 units):
   - PA 605 Seminar in Research Methods in Public Administration (3)
   - PA 606 Seminar in Quantitative Approaches to Public Administration (3)
Complete three courses in one theme listed below (9 units):

**City Planning Theme**
- P A 525 The U.S. City Planning Process (3)
- C P 630 Seminar in Urban Planning Implementation (3)
- C P 640 Seminar in Urban Planning Theory (3)
- C P 670 History of Urban Planning (3)
- C P 690 Seminar in Land Use Planning Principles and Techniques (3)

**Criminal Justice Administration Theme**
- C J 601 Seminar in the Administration of Criminal Justice (3)
- C J 602 Seminar in Comparative Criminal Justice System (3)
- C J 603 Seminar in Community and Restorative Justice (3)
- C J 604 Seminar in Criminal Justice and Urban Administration (3)
- C J 605 Seminar in Juvenile Justice and Youth Violence (3)

**Public Personnel and Labor Relations Theme**
- P A 530 Negotiation and Bargaining in the Public Service (3)
- P A 531 Governmental Employer-Employee Relations (3)
- P A 632 Seminar of Organization Development in the Public Sector (3)
- P A 643 Seminar in Administrative Behavior (3) (Offered only at IVC)

**General Public Administration Theme**
- P A 620 Seminar in Management of Urban Governments (3)
- P A 632 Seminar of Organization Development in the Public Sector (3)
- P A 640 Seminar in Public Administration (3)
- P A 680 Seminar in Transborder Public Administration and Governance (3)
- P A 681 Seminar in Comparative Federalism: Mexico and the U.S. (3)
- P A 683 Seminar in Environmental Administration and Management in the Transborder Region (3)
- P A 684 Seminar in Transnational Criminal Justice: Mexico and the U.S. (3)
- P A 685 Practicum in Border Research (3)
- P A 686 Seminar in Data Sources and Policy Analysis on the U.S./Mexico Border (3)
- P A 687 Seminar in Comparative Urban Planning: Mexico and U.S. (3)

Complete five courses from at least two departments (15 units):

**Latin American Studies**
- LATAM 510 Latin America Research Through Primary Sources (3)
- LATAM 540 History, Society, and Ecology of Baja Peninsula (3)
- LATAM 550 Mexican-US Border from a Latin American Perspective (3)
- LATAM 555 Women's Rights and Citizenship in Latin America (3)
- LATAM 560 Latin America after World War II (3)
- LATAM 580 Special Topics (3)
- LATAM 700 Current Issues in Latin American Politics (3)
- LATAM 797 Research (3) Cr/NC/RP
- LATAM 798 Special Study (3) Cr/NC/RP

**Anthropology**
- ANTH 520 Ethnographic Field Methods (3)
- ANTH 540 Contemporary Cultures of Mesoamerica (3)
- ANTH 582 Regional Anthropology (3)
- ANTH 583 Topic in Anthropology (3)

**Economics**
- ECON 565 North American Economic Relations (3)
- ECON 720 Seminar in Development and Planning\* (3)
- ECON 600-level or above; may include related elective:
  - ECON 561 International trade (3) or ECON 592 International Monetary Theory and Policy (3)

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

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

**Sociology**
- SOC 522 The Family in Comparative and Cross-Cultural Perspectives (3)
- SOC 554 United States-Mexico Transborder Populations and Globalization (3)
- SOC 555 Immigrants and Refugees in Contemporary American Society (3)
- SOC 740 Seminar in Social Psychology: Sociological Approaches\* (3)

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

5. Students must complete P A 799A or LATAM 799A or P A 797 or LATAM 797 (3 units). The thesis (P A 799A or LATAM 799A) must treat a Latin American related topic in public administration and will be supervised by at least one public administration faculty and at least one member of the Latin American studies faculty. A culminating research experience (P A 797 or LATAM 797) must incorporate field research or an internship, and must result in a project that is approved by the graduate advisers in both programs.

6. An internship of 12 units (one semester) beyond the coursework is required of students who have not had equivalent experience. Students should consult with the public administration graduate adviser before enrolling.

7. Students must pass the American Council of Teachers of Foreign Languages (ACTFL) oral proficiency examination in either Spanish or Portuguese with a score of 2.0 or above.

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**Transborder Public Administration and Governance Certificate**

*(Offered through the College of Extended Studies)*

No new students are being admitted to this program. For further information, contact the School of Public Affairs.

The purpose of the Certificate in Transborder Public Administration and Governance is to educate students in how U.S. and Mexico’s systems of public administration and governance function in the border region and what boundary spanning mechanism exists for transborder cooperation on shared issues.

**Admission Requirement**

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 (12 units)

P A 680 Seminar in Transborder Public Administration and Governance (3)
P A 681 Seminar in Comparative Federalism: Mexico and the U.S. (3)
P A 685 Practicum in Border Research (3)

Electives: Three units selected with approval of adviser.

Students must maintain a minimum grade point average of 3.0 in all certificate courses and with no less than a C in any course. Only three units of coursework with a grade of C will count toward the certificate. Additional fees are associated with this program when taking courses through the College of Extended Studies. Additional information may be obtained from Dr. Louis M. Rea.

Courses Acceptable on Master's Degree Program in Public Administration (CJ) (P A)

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

Public Administration (P A)

UPPER DIVISION COURSES

P A 501. Nonprofit Organizations and Government (3)
Prerequisite: Public Administration 301 and 460.
How nonprofit organizations interact with government institutions, influence and pressure government through policy advocacy and activism, and partner with government in contracting, public service provision, and policymaking.

P A 510. Intergovernmental Relations in the United States (3)
Prerequisite: Public Administration 310 or 312 or 315.
Constitution, political and administrative characteristics of American federalism, including regionalism, interstate compacts, and grants-in-aid.

P A 512. The Metropolitan Area (3)
Prerequisite: Public Administration 310 or 312.
Problems of government and administration arising from population patterns and physical and social structures of metropolitan areas.

P A 520. Decision Making in the Urban Community (3)
Prerequisite: Public Administration 310.
Processes of decision making in the management of urban communities.

P A 525. The U.S. City Planning Process (3)
Prerequisite: Public Administration 320 or graduate standing.
Description and critique of traditional city planning process; styles and roles of city planner; city planning values and ethics.

P A 530. Negotiation and Bargaining in the Public Service (3)
Prerequisite: Public Administration 301.
Specific issues such as strategies, the effects of threat, the physical setting, use of a third-party observer and theories of advocacy. Emphasis on analyzing simulations of the bargaining process and developing effective negotiation skills.

P A 531. Governmental Employer-Employee Relations (3)
Prerequisite: Public Administration 330.
Historical development, legal basis, and organizational implications of governmental employer-employee relations; emphasis on California local government.

P A 540. Public Administrative Systems Analysis (3)
Prerequisites: Public Administration 301 and a statistics course.
Systems and organization analysis; work standards and units; procedures analysis; administrative planning.

P A 550. Budgetary and Financial Administration in the Public Sector (3)
Prerequisite: Public Administration 450.
Management trends in public sector financial administration; budgetary procedures and techniques; control and monitoring systems. Cash management, capital projects management, debt administration, disbursement, funds management, and auditing.

P A 580. Comparative Public Administration (3)
Prerequisite: Public Administration 301.
Administrative organization and process of selected foreign and American governments. Analysis of the cultural basis of administrative systems.

P A 596. Experimental Topics (1-4)
Selected current topics in public administration. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units of 596 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES

P A 600. Scope of Public Administration (3)
The development of public administration as an academic discipline; a systematic evaluation of the rise and operations of large-scale public bureaucracies.

P A 604. Methods of Analysis in Public and Urban Affairs (3)
Prerequisite: Credit or concurrent registration in Public Administration 600.
Research design for problems and cases in public affairs; summarizing and organizing data; methods of projection; sampling theory and application; using census and other secondary data sources.

P A 605. Seminar in Research Methods in Public Administration (3)
Prerequisite: Public Administration 604.
Examination of basic research approaches, i.e., legal, historical, and small-group, etc.

P A 606. Seminar in Quantitative Approaches to Public Administration (3)
Prerequisite: Public Administration 604.
Advanced techniques for analyzing problems in public and urban affairs; emphasis on computer applications.

P A 620. Seminar in Management of Urban Governments (3)
Prerequisite: Public Administration 600.
Maximum credit six units applicable to a master's degree.

P A 630. Seminar in Public Personnel Administration (3)
Prerequisite: Public Administration 600.
Analysis of selected problems in personnel administration; special emphasis on organizational development and consultation skills as emerging personnel functions. Maximum credit six units applicable to a master's degree.

P A 632. Seminar of Organization Development in the Public Sector (3)
Prerequisite: Public Administration 600.
Organization development theory and practice. Emphasis on organizational diagnosis, intervention theory, team building and process consultation skills as they apply to public sector organizations.

P A 633. Collective Bargaining in the Public Sector (3)
Prerequisite: Public Administration 530 or 531.
Simulation of public sector collective bargaining. Students will participate in all facets of the bargaining process including data collection, proposal preparation, formal and informal negotiation, fact finding and mediation. Videotape feedback will be used extensively.
P A 640. Seminar in Public Administration (3)
Selected topics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

P A 642. Seminar in Administrative Theory (3)
Prerequisite: Public Administration 600. Organization and management; the executive role, decision making; bureaucracy; authority and power; communication and control and organizational system; tactics and strategies in effective management.

P A 643. Seminar in Administrative Behavior (3)
Prerequisite: Public Administration 340. Intrapersonal, interpersonal and group development knowledge which enhances the administrator's effectiveness. Simulations and structured experiential designs examine behaviors encountered in public bureaucracies.

P A 650. Seminar in Public Financial Management (3)

P A 660. Administration and Public Policy Development (3)
Prerequisite: Public Administration 600. Social, political and administrative problems involved in governmental program development and change.

P A 680. Seminar in Transborder Public Administration and Governance (3)
Prerequisites: Graduate standing. Binational borders and theories and history of international boundaries; roles of public administrators in border regions; history, governance, economy, culture and political structure of U.S. and Mexico.

P A 681. Seminar in Comparative Federalism: Mexico and the U.S. (3)
Prerequisites: Graduate standing. Comparative analysis of governmental structures of Mexico and U.S.; focus on federalism in context of constitutional framework; historical and contemporary expressions of federalism in both countries.

P A 685. Practicum in Border Research (3)
One lecture and four hours of activity. Prerequisite: Graduate standing. Guided research in addressing a border issue; development of research and presentation skills on issues of binational significance; critical policy analysis; identification of informational sources on both sides of border; presentation to professional audience.

P A 686. Seminar in Data Sources and Policy Analysis on the U.S./Mexico Border (3)
Prerequisite: Graduate standing. Data resources and methodologies for conducting research and policy analysis related to local and regional governance of U.S./Mexico border area.

Prerequisite: Public Administration 686. Comparative analysis of urban planning and design in Mexico and the U.S. with focus on historical, constitutional, cultural, and political aspects of planning in both countries.

P A 791. Readings in Public Administration (3) Cr/NC
Prerequisites: Public Administration 600 and advancement to candidacy. Selected readings in the literature of public administration.

P A 792. Problem Analysis (3)

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/NCR be limited to 30 percent of units for the master's degree.

P A 797. Research in Public Administration (3) Cr/NCR/PR
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/PR
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/PR
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: Prior registration in Thesis 799A with an assigned grade symbol of RP. Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

Criminal Justice (CJ)

UPPER DIVISION COURSES

CJ 510. Contemporary Issues in Law Enforcement (3)
Prerequisite: Criminal Justice 310. Assessment of problems confronting administrators of law enforcement agencies and of recent efforts to enhance the capability of agencies to control criminal activity while guarding individual liberties. (Formerly numbered Criminal Justice Administration 510.)

CJ 520. Prosecutorial Function (3)
Prerequisite: Criminal Justice 300. Prosecutor's function at local, state, and federal levels and in selected foreign nations, including appraisal of proposed national standards and goals for prosecutors. (Formerly numbered Criminal Justice Administration 520.)

CJ 531. Probation and Parole (3)
Prerequisite: Criminal Justice 300. Basic concepts, history, legislation, and practices used in work with juveniles and adults who have been placed on probation or parole; criteria of selection, methods of supervision, and elements of case reporting. (Formerly numbered Criminal Justice Administration 531.)

CJ 540. Applied Planning, Research, and Program Evaluation in Criminal Justice (3)
Prerequisite: Criminal Justice 300. Application of planning, research, program development, and evaluation principles to field of criminal justice. (Formerly numbered Criminal Justice Administration 540.)

CJ 543. Community Resources in Criminal Justice (3)
Prerequisite: Criminal Justice 300. Present and probable roles of public and private agencies and volunteers in criminal justice. (Formerly numbered Criminal Justice Administration 543.)

CJ 550. Study Abroad: Criminal Justice (3)
Prerequisites: Criminal Justice 301 and upper division standing. Selected topics in comparative criminal justice. Course taught abroad. May be repeated once with new content. See Class Schedule for specific content. Maximum credit six units.
**CJ 570. Organized Crime: Domestic and International Perspectives (3)**
Prerequisite: Criminal Justice 300.
Interdisciplinary analysis of organized crime’s impact on criminal justice and public policy on both domestic and international levels. (Formerly numbered Criminal Justice Administration 570.)

**GRADUATE COURSES**

**CJ 601. Seminar in the Administration of Criminal Justice (3)**
Prerequisite: Criminal Justice 301.
Administrative problems of criminal justice systems. (Formerly numbered Criminal Justice Administration 601.)

**CJ 602. Seminar in Comparative Criminal Justice System (3)**
Prerequisite: Criminal Justice 301.
The criminal justice system as both cause and consequence of social change; nature of institutional change with application to criminal justice system components. (Formerly numbered Criminal Justice Administration 602.)

**CJ 603. Seminar in Community and Restorative Justice (3)**
Community and restorative justice movement from local, national, and international perspectives. Theories, policies, practices, and research associated with community and restorative justice. (Formerly numbered Criminal Justice Administration 603.)

**CJ 604. Seminar in Criminal Justice and Urban Administration (3)**
Prerequisite: Criminal Justice 540.
Influences on crime control and criminal justice process of actions by urban administrators, legislators and private sector in areas such as housing, education, public health and transportation, and urban development policies. (Formerly numbered Criminal Justice Administration 604.)

**CJ 605. Seminar in Juvenile Justice and Youth Violence (3)**
Prerequisite: Graduate standing.
Juvenile justice system in U.S. and throughout the world. Responses to delinquency and youth violence. History and foundations of juvenile court, juvenile justice reforms, context, causes, and correlates of youth violence and gang involvement, including programs and policies designed to address these problems. (Formerly numbered Criminal Justice Administration 605.)

**CJ 696. Selected Topics in Criminal Justice (3)**
Prerequisite: Criminal Justice 601 or 602.
Analysis of contemporary issues of major import to the administration of criminal justice. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

**CJ 791. Seminar in Readings in Criminal Justice (3)**
Prerequisite: Six graduate units in criminal justice.
Selected readings in the literature of criminal justice. (Formerly numbered Criminal Justice Administration 791.)

**CJ 796. Internship in Criminal Justice (3-12) Cr/NC**
Prerequisite: Consent of instructor.
Students will be assigned to various government agencies and will work under joint supervision of agency heads and the course instructor. Participation in staff and internship conferences. Maximum credit twelve units. (Formerly numbered Criminal Justice Administration 796.)

**CJ 797. Research in Criminal Justice (3) Cr/NC/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

OFFICE: Hardy Tower 119
TELEPHONE: (619) 594-6217 / FAX: (619) 594-6112
E-MAIL: brenda.fass-holmes@sdsu.edu
http://publichealth.sdsu.edu

Faculty

Office of the Director
Carleen H. Stoskopf, Sc.D., Professor of Public Health, Director of School
Caroline A. Macera, Ph.D., Professor of Public Health, Associate Director of School
Ann de Peyster, Ph.D., Professor of Public Health, Associate Director of Development
Suzanne P. Lindsay, Ph.D., M.P.H., Assistant Professor of Public Health, Assistant Director of Public Health Practice

Epidemiology and Biostatistics
Stephanie Kay Brodine, M.D., Professor of Public Health, Division Head
Caroline A. Macera, Ph.D., Professor of Public Health
Thom D. Novotny, M.D., M.P.H., Professor of Public Health
Richard A. Shaffer, Ph.D., M.P.H., Professor of Public Health
Donald J. Smyen, Ph.D., Professor of Public Health
Elena S. H. Yu, Ph.D., M.P.H., Professor of Public Health
John D. Alcaraz, Ph.D., Associate Professor of Public Health
Ming Ji, Ph.D., Associate Professor of Public Health
Hector Lemus, Dr.P.H., Assistant Professor of Public Health
Suzanne P. Lindsay, Ph.D., M.P.H., Assistant Professor of Public Health
Alfonso Rodriguez-Lainz, Ph.D., M.P.V.M., Research Associate Professor of Public Health
Miguel A. Fraga, M.D., Adjunct Associate Professor of Public Health

Health Management and Policy
Robert L. Seidman, Ph.D., Associate Professor of Public Health, Division Head
K. Michael Peddecord, Dr.P.H., Professor of Public Health, Emeritus
Alma L. Kohl, Ph.D., M.P.H., Professor of Public Health
Stephen J. Williams, Sc.D., Professor of Public Health
Jong-Deuk Baek, Ph.D., Assistant Professor of Public Health
Tracy L. Finlayson, Ph.D., Assistant Professor of Public Health
Nick Macchione, M.S., M.P.H., John J. Hanlon Executive Scholar

Health Promotion and Behavioral Science
Gregory A. Talavera, M.D., M.P.H., Professor of Public Health, Division Head
John P. Elder, Ph.D., M.P.H., Distinguished Professor of Public Health
Melbourne F. Hovell, Ph.D., M.P.H., Distinguished Professor of Public Health
Guadalupe X. Ayala, Ph.D., Associate Professor of Public Health
Paula M. Usita, Ph.D., Associate Professor of Public Health
Elva M. Arredondo, Ph.D., Assistant Professor of Public Health
Hala N. Madanat, Ph.D., Assistant Professor of Public Health

Environmental Health
Richard M. Gersberg, Ph.D., Professor of Public Health, Division Head
Ann de Peyster, Ph.D., Professor of Public Health
P.J.E. (Jenny) Quintana, Ph.D., M.P.H., Associate Professor of Public Health
M. Zohir Chowdhury, Ph.D., Assistant Professor of Public Health

Preventive Medicine Residency
Linda L. Hill, M.D., M.P.H., Adjunct Associate Professor of Public Health, Director
Kevin M. Patrick, M.D., M.S., Adjunct Professor of Public Health, Associate Director
Robert Gunn, M.D., M.P.H., Adjunct Associate Professor of Public Health
Wilma Wooten, M.D., M.P.H., Adjunct Associate Professor of Public Health

The John J. Hanlon Chair in Health Services Research and Policy
Alvarado Hospital Medical Center has joined with SDSU’s faculty and staff to create The John J. Hanlon Chair in Health Services Research and Policy in the Graduate School of Public Health (GSPH). The chair is named in honor of the late Dr. John J. Hanlon, former assistant surgeon general for the U.S. Public Health Service. Dr. Hanlon coordinated the planning and development of SDSU’s Graduate School of Public Health.

General Information
The Graduate School of Public Health offers advanced study leading to the degrees of Doctor of Philosophy, Master of Public Health, Master of Science, and a program that allows students to earn the Master of Public Health concurrently with the Master of Social Work, the Master of Arts in Latin American Studies, or the Doctor of Medicine. The Ph.D. is offered in three concentration areas, to include epidemiology, global health, health behavior with various specialization opportunities (see doctoral program); the M.P.H. is offered with concentrations in the areas of biometry, environmental health, epidemiology, health promotion and behavioral science, health management and policy, and a specialization in global emergency preparedness and response; the M.S. degree is offered with a concentration in the area of toxicology. In addition to these advanced degree programs, the school offers a preventive medicine residency program that prepares qualified physicians to sit for the American Board of Preventive Medicine certification examination. Residents may receive the M.P.H. degree along with completion of this residency program. Finally, the public health faculty directs academic study leading to a Bachelor of Science degree in health science for those undergraduate students interested in public health. For more information concerning this undergraduate program, see the General Catalog.

The Graduate School of Public Health is nationally accredited by the Council on Education for Public Health (CEPH). The graduate program in health management and policy is accredited by the Commission on Accreditation for Health Management Education (CAHME), and the preventive medicine residency program is accredited by the Accrediting Commission for Graduate Medical Education (ACGME).

The curriculum in the Graduate School of Public Health has been designed to prepare students as practitioners of public health as well as for careers in teaching and research and as leaders in both public and private sector agencies and organizations. To accomplish this mission effectively, the faculty of the Graduate School of Public Health is augmented by expert practitioners in specialized fields related to public health who contribute to both the academic and practical experiences of students pursuing public health degrees. These professionals, who
Affiliated Research Centers
In an effort to serve better the community at large, the Graduate School of Public Health sponsors the Institute for Public Health. The institute serves as the school’s bridge with the community, facilitating field practice opportunities, community-based research and program evaluations, and a venue for continuing education.

In addition, a number of research centers have been established to integrate the specialized research of its faculty and students. These are the Center for Behavioral and Community Health, the Center for Behavioral Epidemiology and Community Health, the California Distance Learning Health Network, and the Center for Injury Prevention Policy and Practice. For more information on these centers, see Part Three of this bulletin.

Admission to Master's and Doctoral Study

Master of Public Health Degree

Master of Science Degree in Public Health

Application procedures and deadlines are being revised. Prospective applicants for the Master of Public Health and Master of Science degree programs should go to http://publichealth.sdsu.edu to obtain information on application procedures and deadlines.

Master of Public Health Degree and Master of Arts Degree in Latin American Studies

Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee as described in Part Two of this bulletin. All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Graduate School of Public Health.

Graduate Admissions

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

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

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

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

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

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

Graduate School of Public Health

Applicants seeking admission to the Master of Public Health and Master of Arts degree in Latin American Studies should contact the Graduate School of Public Health requesting appropriate descriptive materials. Detailed application instructions can be obtained from our Web site at http://publichealth.sdsu.edu.

Students who do not fully meet the requirements for admission with classified graduate standing may be considered for conditionally classified graduate standing upon recommendation of the admissions committee and the graduate adviser.

Master of Social Work Degree and Master of Public Health Degree

Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee as described in Part Two of this bulletin. All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Social Work.
Public Health

Graduate Admissions

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

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

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

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

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

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

School of Social Work

The following materials should be mailed or delivered to:

School of Social Work
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4119

(1) A narrative statement as described in Instructions for Applicants;

(2) Three letters of recommendation.

Ph.D. Degree in Public Health

Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee as described in Part Two of this bulletin.

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

Graduate Admissions

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

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

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

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

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

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

Graduate School of Public Health

The following materials should be submitted by December 15 for fall semester admission to:

Graduate School of Public Health
(Attention: Coordinator for Admissions and Student Affairs)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4162

(1) Graduate School of Public Health Ph.D. application form, Parts I and II (includes narrative statement), http://publichealth.sdsu.edu/phdapplication.php;

(2) Three letters of recommendation;

(3) Photocopy of GRE scores report;

(4) Official transcripts (in sealed envelopes) from all colleges and universities attended.

Section I.

Master’s Degree Programs

Master of Public Health Degree

Admission to the Degree Curriculum

Applicants seeking admission to public health concentration areas leading to either the Master of Public Health or Master of Science degree should contact the Graduate School of Public Health requesting appropriate descriptive materials. Detailed application instructions can be obtained from our Web site: (http://publichealth.sdsu.edu).

Applicants for the biometry concentration are required to have successfully completed undergraduate courses in single and multivariate calculus.

Students who do not fully meet the requirements for admission with classified graduate standing may be considered for conditionally classified graduate standing upon recommendation of the admissions committee and the graduate adviser.

Advancement to Candidacy

All students must: (1) meet the general requirements for advancement to candidacy as described in Part Four of this bulletin; (2) satisfactorily pass a faculty evaluation of the progress that they are making in their graduate course of study; (3) complete the core courses, Public Health 601, 602, 603, 604, 605 (students in health management and policy will substitute Public Health 641 for Public Health 605, and students in health promotion and behavioral science will substitute Public Health 661 and 662 for Public Health 603); have a grade point average of at least 3.0 and no grade less than a B– in each core course completed; (4) have completed a minimum of three units of Public Health 650; and (5) have completed at least 12 semester units of approved public health coursework.

In addition, the student must be recommended for advancement to candidacy by the faculty of the Graduate School of Public Health.

Specific Requirements for the Master of Public Health Degree

(Major Code: 12141) (SIMS Code: 557301)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the student must complete an officially approved course of study of not less than 51 units including:

(1) Public Health 601, 602, 603, 604, and 605 (students in health management and policy will substitute Public Health 641 for Public Health 605 and students in health promotion and behavioral science will substitute Public Health 661 and 662 for Public Health 603); (2) a minimum of 21 units of graduate courses in the area of concentration; (3) a minimum of three and a maximum of 12 units of supervised field placement; and (4) electives selected with the approval of the graduate adviser. In addition, Public Health 797, Research, Public Health 798, Special Study, or Public Health 799A, Thesis, must be included in the program as a capstone experience.

Concentrations in biometry, epidemiology, and health promotion and behavioral science require three units of field placement for the Master of Public Health degree. The concentration in health management and policy and the concentration in environmental health both require six units of field placement.

Up to nine units of graduate credit may be accepted in transfer, with the approval of the graduate adviser.

In special circumstances, the graduate adviser may approve one course not on the list of prescribed electives. The substitution must be approved prior to enrollment in the course.
Concentration in Biometry
(SIMS Code: 557308)
Courses required for the concentration:
P H 601 Epidemiology (3)
P H 602 Biostatistics (3)
P H 603 Behavioral and Social Science in Public Health (3)
P H 604 Environmental Determinants of Human Health (3)
P H 605 Health Services Administration (3)
P H 623 Epidemiological Methods (3)
P H 627 Advanced Statistical Methods in Public Health (3)
P H 628 Applications of Multivariate Statistics in Public Health (3)
P H 650R Required Community Practice (3) Cr/NC
STAT 551A Probability and Mathematical Statistics (3)
STAT 551B Probability and Mathematical Statistics (3)
Prescribed electives: Six units selected from the following public health courses:
P H 649 Border and Global Public Health Surveillance (3)
P H 700A Seminar in Public Health: Epidemiology (3)
P H 722 Seminar in Clinical Trials (3)
P H 724 Advanced Methods in Epidemiology (3)
P H 823 Case-Control Studies (3)
P H 824 Cohort Studies (3)
P H 826 Analysis of Case-Control Studies (3)
P H 827 Analysis of Cohort Studies (3)

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:
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
OR
P H 799A Thesis (3) Cr/NC/RP
Prescribed electives: Six units of coursework selected with the approval of the faculty adviser from:
P H 625 Control of Infectious Diseases (3)
P H 630 Environmental Health Risk Assessment (3)
P H 638A Principles of Toxicology (3)
P H 650H Field Practice: Global Emergency Preparedness and Response (3)
P H 780 Global Health I (3)
OR
P H 781 Global Health II (3)
H SEC 603 Seminar in Emergency Preparedness and Response (3)
### Concentration in Health Management and Policy

(SIMS Code: 557415)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>P H 601</td>
<td>Epidemiology</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 602</td>
<td>Biostatistics</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 603</td>
<td>Behavioral and Social Science in Public Health</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 604</td>
<td>Environmental Determinants of Human Health</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 641</td>
<td>Introduction to Health Services</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 644</td>
<td>Health Services Organization and Management</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 645</td>
<td>Health Economics</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 647</td>
<td>Quantitative Methods and Health Data Analysis</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 648</td>
<td>Health Policy</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 650R</td>
<td>Required Community Practice</td>
<td>Cr/NC</td>
</tr>
<tr>
<td>P H 742A</td>
<td>Health Services Financial Management</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 742B</td>
<td>Health Insurance and Financing Systems</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 747</td>
<td>Quality Improvement and Program Evaluation</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 748</td>
<td>Health Services Competitive Strategy and Marketing</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 750E</td>
<td>Advanced Field Practice: Health Management and Policy</td>
<td>(3) Cr/NC</td>
</tr>
<tr>
<td>P H 797</td>
<td>Research (3) Cr/NC/RP</td>
<td>OR</td>
</tr>
<tr>
<td>P H 799A</td>
<td>Thesis (3) Cr/NC/RP</td>
<td>OR</td>
</tr>
</tbody>
</table>

**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.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>P H 670</td>
<td>Public Health Law and Ethics</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 700E</td>
<td>Seminar in Public Health: Health Management and Policy</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 743</td>
<td>Hospitals and Ambulatory Health Management</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 745</td>
<td>International Health Policy</td>
<td>(3)</td>
</tr>
</tbody>
</table>

### Concentration in Health Promotion and Behavioral Science

(SIMS Code: 557343)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>P H 601</td>
<td>Epidemiology</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 602</td>
<td>Biostatistics</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 604</td>
<td>Environmental Determinants of Human Health</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 605</td>
<td>Health Services Administration</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 607</td>
<td>Research Methods</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 650R</td>
<td>Required Community Practice</td>
<td>Cr/NC</td>
</tr>
<tr>
<td>P H 661</td>
<td>Theoretical Foundations of Health Promotion</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 662</td>
<td>Motivating Health Behavior</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 663</td>
<td>Health Promotion Communications Theory and Design</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 666</td>
<td>Health Promotion Program Planning and Assessment</td>
<td>(3)</td>
</tr>
</tbody>
</table>

**Prescribed electives (choose two or more different courses from):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>P H 664</td>
<td>Health, Society and Human Behavior</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 667</td>
<td>Prevention and Control of Chronic Diseases</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 668</td>
<td>Seminar in Health Promotion Research</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 700F</td>
<td>Seminar in Public Health: Health Promotion and Behavioral Science</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 762</td>
<td>Behavioral Medicine</td>
<td>(3)</td>
</tr>
<tr>
<td>P H 797</td>
<td>Research (3) Cr/NC/RP</td>
<td>OR</td>
</tr>
</tbody>
</table>

**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:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicology</td>
<td>15</td>
</tr>
<tr>
<td>Prescribed electives</td>
<td>15</td>
</tr>
<tr>
<td>Field Practice*</td>
<td>–</td>
</tr>
<tr>
<td>P H 797 (Research)</td>
<td>3</td>
</tr>
<tr>
<td>P H 799A (Thesis)</td>
<td>3</td>
</tr>
</tbody>
</table>

Total units: 36

* A 3-unit field practice may be taken as an elective by students with approval of the academic adviser.
Specific Requirements for Master of Science Degree Programs

Concentration in Toxicology
(SIMS Code: 557395)

Prerequisite courses (6 units):
- P H 601 Epidemiology (3)
- P H 602 Biostatistics (3)

Courses required for the concentration (15 units):
- P H 630 Environmental Health Risk Assessment (3)
- P H 637 Mechanisms of Toxicity (3)
- P H 638A Principles of Toxicology (3)
- P H 638B Methods in Toxicity Testing (3)
- P H 738 Topics in Toxicology (3)

Prescribed electives: A minimum of 15 units of coursework selected from the following list with the approval of the faculty adviser.
- P H 603 Behavioral and Social Science in Public Health (3)
- P H 604 Environmental Determinants of Human-Health (3)
- P H 627 Advanced Statistical Methods in Public Health (3)
- P H 632 Air Quality (3)
- P H 635 Environmental and Disaster Medicine (3)
- P H 636 Hazardous Waste Management (3)
- P H 639 Water Quality Investigation (3)
- P H 650D Field Practice: Environmental Health (3) Cr/NC
- P H 700D Seminar in Public Health: Environmental Health (3)
- P H 721 Environmental Epidemiology (3)
- P H 798 Special Study (1-3) Cr/NC,RP

In special circumstances, the graduate adviser may approve one course not on the list of prescribed electives. The substitution must be approved prior to enrollment in the course.

Master of Public Health Degree and Master of Arts Degree in Latin American Studies

General Information

The Graduate School of Public Health (GSPH) and the Center for Latin American Studies offer a concurrent graduate program leading to a Master of Public Health (MPH) in Epidemiology, Environmental Health, or Health Promotion and Behavioral Science and a Master of Arts (MA) in Latin American Studies. This concurrent program offers preparation in the fields of public health and Latin American studies for the purpose of promoting health, preventing disease, and enhancing the delivery of social and health services in Latino communities.

Admission to the Degree Curriculum

To request information about the concurrent graduate program in Public Health and Latin American Studies, applicants should contact either the Graduate School of Public Health Director of the MPH/MA program, or the Latin American Studies Director of the M.A. program, San Diego State University. Students must meet the general requirements to graduate study at the university as detailed in Part Two of this bulletin. Application materials are also available from the GSPH Web site at http://publichealth.sdsu.edu or the Center for Latin American Studies Web site at http://latinamericanstudies.sdsu.edu.

Advancement to Candidacy

All students must: (1) meet the general requirements for advancement to candidacy as described in Part Four of this bulletin; (2) pass an evaluation of progress towards the concurrent degree by both GSPH and Latin American Studies advisers; (3) complete all core courses in Public Health and Latin American Studies; (4) have earned at least 24 units of graduate study within the concurrent program with a minimum grade point average of 3.0 and no grade less than a B- in each core course; (5) have been recommended for advancement by the combined faculty advisory committee; (6) have an approved concurrent program of study; and (7) have a thesis proposal approved by the combined faculty advisory committee, which must include at least one faculty member from Latin American Studies and one faculty member from Public Health.

Upon advancement to candidacy, the student will enroll in Public Health or Latin American Studies 797 (Research) and Public Health or Latin American Studies 799A (Thesis). All students in the concurrent degree program are required to complete a thesis. This thesis will incorporate theory, method, and analytic techniques from both Public Health and Latin American Studies. The thesis topic and chair will be determined by the student and the faculty advisory committee. All students must pass the American Council of Teachers of Foreign Language (ACTFL) oral proficiency examination in either Spanish or Portuguese with a score of 2.0 or above.
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)</td>
<td>P H 797 or LATAM 797 (3)</td>
</tr>
<tr>
<td>P H 602 (3)</td>
<td>ANTH 520 (3) LATAM 580 (3) POL S 696 (3)</td>
<td>P H 799A or LATAM 799A (3)</td>
</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>
<td></td>
</tr>
<tr>
<td>LATAM 601 (3)</td>
<td>HIST 551 (3) POL S 555 (3) WMNST 512 (3)</td>
<td></td>
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<tr>
<td></td>
<td>HIST 640 (3) POL S 568 (3) WMNST 565 (3)</td>
<td></td>
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<tr>
<td></td>
<td>POL S 655 (3) WMNST 580 (3)</td>
<td></td>
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<tr>
<td></td>
<td>POL S 661 (3) WMNST 605 (3)</td>
<td></td>
</tr>
</tbody>
</table>

Public Health Concentration Requirements
Total Units = 24
(Students must complete one of the following concentrations)

<table>
<thead>
<tr>
<th>Epidemiology Concentration (SIMS Code: 997311)</th>
<th>Health Promotion and Behavioral Science Concentration (SIMS Code: 997312)</th>
<th>Environmental Health Concentration (SIMS Code: 997313)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Epidemiology Units = 24</td>
<td>Total Health Promotion and Behavioral Science Units = 24</td>
<td></td>
</tr>
<tr>
<td>Required Courses (15 units)</td>
<td>Required Courses (15 units)</td>
<td>Required Courses (18 units)</td>
</tr>
<tr>
<td>P H 603 (3)</td>
<td>P H 607 (3)</td>
<td>P H 603 (3)</td>
</tr>
<tr>
<td>P H 621 (3)</td>
<td>P H 661 (3)</td>
<td>P H 632 (3)</td>
</tr>
<tr>
<td>P H 622 (3)</td>
<td>P H 662 (3)</td>
<td>P H 634 (3)</td>
</tr>
<tr>
<td>P H 623 (3)</td>
<td>P H 663 (3)</td>
<td>P H 636 (3)</td>
</tr>
<tr>
<td>P H 627 (3)</td>
<td>P H 666 (3)</td>
<td>P H 638A (3)</td>
</tr>
<tr>
<td>Prescribed Electives (6 units)</td>
<td>Prescribed Electives (6 units)</td>
<td>Prescribed Electives (at least 6 units)</td>
</tr>
<tr>
<td>P H 625 (3)</td>
<td>P H 664 (3)</td>
<td>P H 630 (3)</td>
</tr>
<tr>
<td>P H 626 (3)</td>
<td>P H 667 (3)</td>
<td>P H 635 (3)</td>
</tr>
<tr>
<td>P H 628 (3)</td>
<td>P H 668 (3)</td>
<td>P H 637 (3)</td>
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<td>P H 726 (3)</td>
<td>P H 700F (3)</td>
<td>P H 721 (3)</td>
</tr>
<tr>
<td>P H 700A (3)</td>
<td>P H 721 (3)</td>
<td>P H 738 (3)</td>
</tr>
<tr>
<td>P H 721 (3)</td>
<td>P H 762 (3)</td>
<td>P H 798 (1-3)</td>
</tr>
<tr>
<td>Electives (3 units)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOL 585,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NUTR 600, 606, 607, 700,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAT 510, 550, 551A, 560, 672, 677,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>or three units of electives to be selected with approval of the faculty advisory committee.</td>
<td></td>
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</tr>
</tbody>
</table>

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
Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin. All core courses in public health and social work must be completed prior to advancement. In addition, the student must: (1) have earned at least 24 units of graduate study within the concurrent program with a minimum grade point average of 3.0 and no grade less than a B– in each core course; (2) have been recommended for advancement by the combined faculty advisory committee; received credit (Cr) in field practicum; (3) have a thesis proposal approved by the combined faculty advisory committee.

Upon advancement to candidacy, the student will enroll in Public Health 797 (Research), Social Work 797 (Research), and Public Health 799A (Thesis) or Social Work 799A (Thesis). A thesis incorporating theory, method, and analytic techniques from both disciplines is the culminating experience for the concurrent program leading to the M.S.W. and M.P.H. degrees.

Specific Requirements for the MSW/MPH Degree

(Major Code: 12991) (SIMS Code: 998210)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the student must complete an approved course of study of not less than 90 units.

### Social Work/Public Health – Health Management and Policy (SIMS Code: 998220)

SWORK 601 Seminar in Social Welfare Policy and Services (3)
SWORK 619 Human Behavior in the Social Environment (3)
SWORK 620A Seminar in Human Behavior and Social Environment: Direct Practice (3)
SWORK 630 Social Work Practice: A Generalist Perspective (3)
SWORK 631 Social Work Practice: Individuals, Families, and Groups (3)
SWORK 632 Social Work Practice: Organizations and Communities (3)
SWORK 650* Field Practicum (7) Cr/NC
SWORK 690 Seminar in Social Work Research Methods (3)
SWORK 740 Advanced Seminar in Social Work Administration and Community Development (3)
SWORK 745 Advanced Seminar in Selected Topics in Social Work Administration (3)
SWORK 755* Advanced Field Practicum: Social Work Administration and Community Development (8) Cr/NC/RP

SWORK 797 Research (3) Cr/NC/RP

P H 601 Epidemiology (3)
P H 602 Biostatistics (3)
P H 604 Environmental Determinants of Human Health (3)
P H 641 Introduction to Health Services (3)
P H 644 Health Services Organization and Management (3)
P H 645 Health Economics (3)
P H 647 Quantitative Methods and Health Data Analysis (3)
P H 648 Health Policy (3)
P H 742A Health Services Financial Management (3)
P H 742B Health Insurance and Financing Systems (3)
P H 747 Quality Improvement and Program Evaluation (3)
P H 748 Health Services Competitive Strategy and Marketing (3)
P H 797 Research (3) Cr/NC/RP

Electives: Three units of social work electives.

Transfer units will not be accepted toward the concurrent MSW/MPH degree program. Graduate study or degrees obtained previously will not be accepted toward meeting the unit requirements of the concurrent MSW/MPH degree program.

If a student, after entering the concurrent MSW/MPH program returns to a single degree program, all of the requirements for the single degree program must then be met.

* Social Work 650 and 755 must have the approval of the faculty advisory committee. Responsibility for faculty field supervision will be assigned in social work.
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 advanced quantitative research methods; to establish advanced skills in the application of interventions and research methods to health behavior in disenfranchised populations; and to establish skills necessary to understand and change health policy. Graduates of the program are competitive for a variety of research, teaching, and community service positions in areas such as academic institutions, local and state health departments, federal and international agencies, and both privately and publicly sponsored research institutions.

Admission to the Degree Curriculum

Applicants for admission to the doctoral program must present evidence of capacity for graduate study in public health. A multidisciplinary field such as public health draws from a wide variety of undergraduate majors, but the student is expected to have a strong grounding in the quantitative, behavioral, and biological sciences. A master’s degree in an area related to the concentration is preferred. Admission to the program requires acceptance by both institutions on recommendation of the participating units at SDSU and UCSD. It is understood that acceptance of a student into the joint program by each of the units will be conditioned by their respective standards for graduate admissions, and also the available facilities.

To be considered for admission to the joint SDSU-UCSD doctoral program in public health, students must meet the general requirements for admission to both universities with classified graduate standing as outlined in the respective current catalogs. These include (a) an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or equivalent academic preparation, as determined by the deans of the two Divisions of Graduate Affairs; (b) a GPA of at least 3.0 in the last 60 semester (90 quarter) units attempted; (c) good standing at the last institution attended; and (d) an acceptable score (verbal and quantitative) on the GRE General Test. Preference will be given to students with an M.P.H. or M.S. degree in behavioral science or epidemiology.

Residency Requirements

After formal admission to the joint doctoral program, the student must spend at least one academic year in full-time residence on each of the two campuses. The definition of residence must be in accord with the regulations of San Diego State University and University of California, San Diego.

Advisory Committee

Upon admission to the program, the steering committee of the two institutions will establish an advisory committee for the student. This committee will consist of three faculty members chosen jointly from the two institutions. In consultation with the student, the committee will develop the student’s course of study, prepare and guide a preliminary examination, and establish the student’s joint qualifying committee. At least one member of the advisory committee must be from SDSU and one from UCSD.

Course Requirements

Core courses in behavioral science, epidemiology, and biostatistics are offered at both SDSU and UCSD. Prior to taking the qualifying examination, every student is expected to have a firm understanding of modern principles of public health as well as knowledge and application of epidemiology, behavioral science, and biostatistical methods. Elective coursework may be selected from offerings at both campuses.

Course Requirements for Students with an Existing M.P.H. or M.S. Degree in Epidemiology

Epidemiology: Public Health 623, 724, 800 (Doctoral Seminar in Epidemiology); six units in advanced study design selected from Public Health 722, 823, 824; and six-unit UCSD course series in applied epidemiology (FPM 259A, 259B, 259C).

Biostatistics: Public Health 628 and six units in advanced biostatistics.

Electives: 24 units in specialty area.

Graduate Assistantship in Epidemiology: 6 units

Dissertation Research and Proposal: 15 units

Students who do not possess an existing M.P.H. or M.S. degree in epidemiology are required to take the following additional courses: Public Health 601, 602, 621, 622, and 627. Once the student is matriculated at SDSU, the final curriculum will be determined by the doctoral advising committee.

Preliminary Examinations

The preliminary examinations will test knowledge and the application of epidemiology and biostatistical methods.

Course Requirements for Students with an Existing M.P.H. Degree

Global Health: Public Health 628, 649, 700A, 780, 781, 800, 880, and the following courses offered at UCSD (nine units): FPM (Emerging/Re-Emerging Global Infectious Diseases, FPM (Practicum/Independent Study).

Electives: Six or more units in specialty area to include Public Health 784 and courses selected from other departments with the approval of the adviser.

International Practicum: Field Experience: 3-12 units

Dissertation Research and Proposal: 15 units

Students who do not possess an existing M.P.H. or M.S. degree in Public Health are required to take the following additional courses: Public Health 601, 602, and 627. Once the student is matriculated at SDSU, the final curriculum will be determined by the doctoral advising committee.

Course Requirements for Students with an Existing M.P.H. or M.S. Degree in Behavioral Science

Health Behavioral Science: Public Health 800, 861, 862; six units in advanced study design selected from Public Health 722, 863, 866; and six-unit UCSD course series in applied epidemiology (FPM 259A, 259B, 259C).

Biostatistics: Public Health 628 and six units in advanced biostatistics.

Electives: 24 units in specialty area.

Graduate Assistantship: 6 units

Dissertation Research and Proposal: 15 units

Students who do not possess an existing M.P.H. or M.S. degree are required to take the following additional courses: Public Health 601, 607, 627, 661, 662, 663. Once the student is matriculated at SDSU, the final curriculum will be determined by the doctoral advising committee.

SDSU GRADUATE BULLETIN 2011-2012
Doctoral Committee

A five-member committee, composed of faculty at SDSU and UCSD, will be recommended by the advisory committee for each student and approved by the graduate deans from both campuses. One member must be nonprogram faculty and there must be at least one tenured faculty member from each university. The student’s dissertation adviser will chair the committee. At least two members must be from SDSU and two from UCSD.

The doctoral committee will conduct a written and oral comprehensive qualifying examination, which will evaluate the student’s understanding and knowledge of his or her special area of behavioral science or epidemiologic interest. The purpose of this examination is for the student to demonstrate competence in the major research field.

The doctoral committee may specify a course of study to strengthen any weaknesses identified during the qualifying examination. Upon successful completion of the qualifying examination the student must make application to the Division of Graduate Affairs at UCSD for advancement to candidacy. Upon payment of the candidacy fee to UCSD, and after approval by the graduate deans on both campuses, the student will be notified of advancement to candidacy by the UCSD Division of Graduate Affairs.

Faculty

Faculty members of the cooperating institutions participate in the joint doctoral program in Public Health Epidemiology and are available for direction of research and as members of joint doctoral committees.

Dissertation

Following successful completion of the qualifying examination and advancement to candidacy, the major remaining requirement for the Ph.D. degree will be satisfactory completion of a dissertation consisting of original and significant research carried out under the guidance of the dissertation adviser, who may be from either SDSU or UCSD. The doctoral committee becomes the dissertation committee after the student’s advancement to candidacy. Requirements currently in force at SDSU and UCSD must be met for completing and filing the dissertation.

Award of the Degree

The Doctor of Philosophy degree will be awarded jointly by the Trustees of The California State University and the Regents of the University of California in the names of both institutions.

Financial Support

The Graduate School of Public Health at SDSU and the Department of Community and Family Medicine at UCSD endeavors to provide financial support that will enable all students to devote full time to research training and study.

Medical Students Interested in Obtaining the Master of Public Health (M.P.H.) Degree

San Diego State University, Graduate School of Public Health, and University of California, San Diego, School of Medicine, offer a collaborative education effort to enable UCSD medical students 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.

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, 619-534-3690 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. Kuhn at 858-576-4047. For specific questions concerning the Masters in Public Health degree, contact the coordinator of Admissions and Student Affairs at 619-594-4492.

Courses Acceptable on Master's and Doctoral Degree Programs (P H)

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

GRADUATE COURSES

P H 601. Epidemiology (3)
Prerequisite: Consent of instructor.
Distribution and determinants of diseases; role of epidemiology in public health. Descriptive, analytic and experimental epidemiology.

P H 602. Biostatistics (3)
Prerequisite: Consent of instructor.
Statistical reasoning applied to public health; probability, hypothesis testing, regression and correlation, analysis of variance, measurement theory and modeling.

P H 603. Behavioral and Social Science in Public Health (3)
Prerequisites: Psychology 316, 340, and Sociology 436.
Role of psychological, social and environmental variables in health and illness. Multifactorial psychosocial model of disease susceptibility.

P H 604. Environmental Determinants of Human Health (3)
Prerequisites: Biology 100, Chemistry 100.
Environmental determinants and their influence on human health. Biological, physical, and chemical factors which affect the health of a community.

P H 605. Health Services Administration (3)
Overview of health services administration and delivery in U.S. Characteristics of utilization of health care, financing and system structure, types of providers, nonfinancial resources, and assessment and regulation.

P H 607. Research Methods (3)
Two lectures and three hours of laboratory.
Prerequisites: Public Health 601, 661, and consent of instructor. Recommended: Public Health 602.
Direct observation measurement, group and intensive experimental designs. Laboratory exercises and proposal writing applicable to public health.

P H 621. Epidemiology of Infectious Diseases (3)
Prerequisite: Public Health 601.
Utilizing selected infectious diseases and environmental settings, provides scientific background on which epidemiological investigations and control measures are based.

P H 622. Epidemiology of Chronic Diseases (3)
Prerequisite: Public Health 601.
Epidemiology of selected chronic diseases.

P H 623. Epidemiological Methods (3)
Prerequisites: Public Health 602, 621 or 622.
Topics include: analysis of descriptive data, design of studies, evaluation of data, development of biological models. Examples of both acute and chronic diseases.

P H 624A. Emergency Preparedness and Response I (3)
Prerequisite: Classified graduate standing.
Dynamics of natural and man-made disaster management to include planning, organization, management of relief services, and emergency service organizations. Prevention, mitigation, and response to emergency situations, both nationally and internationally.

P H 624B. Emergency Preparedness and Response II (3)
Prerequisite: Public Health 624A.
Terrorism, emergency management, incident command, and communications. Examine policy, legal, social, and psychological implications of disasters.

P H 625. Control of Infectious Diseases (3)
Prerequisite: Public Health 621.
Theoretical and practical experience in techniques available for control of infectious diseases.

P H 626. International Health Epidemiology Practicum (3)
One lecture and two hours of activity.
Prerequisites: Public Health 601 and 602.
Integrated public health experience with US and Mexican graduate student and faculty teams, culminating with four days in Mexico. International public health projects in underserved indigenous populations.

P H 627. Advanced Statistical Methods in Public Health (3)
Prerequisite: Public Health 602.
Applications of advanced statistical methods for analysis of public health and biomedical data. Topics include multiple linear regression, analysis of variance, logistic regression, and introduction to survival analysis.

P H 628. Applications of Multivariate Statistics in Public Health (3)
Prerequisite: Public Health 627.
Statistical methods for multivariate problems in public health including regression diagnostics, cluster analysis, discriminant analysis, principal components, multivariate discrete analysis and Poisson regression. Computer applications included.

P H 630. Environmental Health Risk Assessment (3)
Four major steps of risk assessment to include hazard identification, dose-response assessment, exposure assessment, and risk characterization. Will also include risk communication and risk management in environmental arena.

P H 632. Air Quality (3)

P H 634. Environmental Protection (3)
Rationale and mechanisms for control of environmental hazards in areas of food protection and vector control, solid waste, and community issues.

P H 635. Environmental and Disaster Medicine (3)
Etiology, diagnosis of disease, and stress in the modern global environment. Detection and control of intentional biological, chemical disasters, and nuclear threats.
P H 636. Hazardous Waste Management (3)
Prerequisite: Chemistry 201.
Rationale, methods, and regulations governing the proper management of hazardous and toxic wastes.

P H 637. Mechanism of Toxicity (3)
Prerequisites: Biology 261 and Chemistry 160.
Biologic effects and underlying mechanisms of action of harmful environmental agents on mammalian cells and tissues. Emphasis on toxic chemicals and applications of basic mechanisms research to public health situations.

P H 638A. Principles of Toxicology (3)
Prerequisites: Biology 261 and Chemistry 160.
Dose-response and other principles for evaluating the effects of toxic chemicals on mammalian organ systems.

P H 638B. Methods in Toxicity Testing (3)
One lecture and six hours of laboratory.
Prerequisite: Credit or concurrent registration in Public Health 638A.
Laboratory methods used in evaluating chemicals for potential human toxicity.

P H 639. Water Quality Investigation (3)
Two lectures and three hours of laboratory.
Prerequisite: Public Health 604 or 634.
Human health problems associated with water usage and with various aquatic environments.

P H 641. Introduction to Health Services (3)
Health care systems in the U.S. Underlying needs, insurance and uninsurance, public programs, reimbursement, managed care, resources, providers, regulation outcome measurement and evaluation, and health policy issues.

P H 644. Health Services Organization and Management (3)
Prerequisite: Credit or concurrent registration in Public Health 641.
Structure and functioning of organizations that provide and finance health services using a systems theory approach to visions/goals, strategies, structure, and processes. Functions of managers in health care organizations, focusing on interpersonal, informational, decision, ethical, and conflict resolution roles.

P H 645. Health Economics (3)
Prerequisite: Public Health 641.
Economics of health care, including supply and demand factors, efficiency, incentives facing physicians, hospitals, and health plans, economic evaluation of provider performance, health workforce issues, and cost-effectiveness analysis.

P H 647. Quantitative Methods and Health Data Analysis (3)
Prerequisites: Public Health 602 and 641.
Quantitative methods and data analyses in health services administration. Topics include decision analysis, forecasting and regression, project management techniques, data analysis, and data and information management applications.

P H 648. Health Policy (3)
Prerequisite: Credit or concurrent registration in Public Health 641.
History and future of health policy. Research on major health policy issues including economic, social, ethical, and political forces that influence priorities and decisions. Role of government and private sector in health care.

P H 649. Border and Global Public Health Surveillance (3)
Prerequisites: Public Health 601 and 602.
Data sources for border and global surveillance, including hospital system syndromic data. Methods of data quality control, data analysis, and alerting and communication of information.

P H 650. Field Practice (3-6) Cr/NC
Field instruction in public health settings. Application of public health principles and skills to practical problems. Maximum credit six units of Public Health 650 applicable to a master’s degree.
A. Epidemiology
B. Biometry
C. Environmental Health
D. Health Management and Policy
F. Health Promotion and Behavioral Science
G. Global Emergency Preparedness and Response
H. 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.
Behavioral, sociological, and psychological aspects of health and illness, with implications for health care delivery and resource allocation.

P H 665. 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.
PH 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 586 and 696 applicable to a master’s degree with approval of the graduate adviser.

PH 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  
C. Environmental Health  
D. Health Management and Policy  
E. Health Promotion and Behavioral Science  
F. Preventive Medicine  
G. Global Health Preparedness and Response

PH 721. Environmental Epidemiology (3)  
Uses of epidemiological methods in study of environmental hazards affecting community health and health of workers. Case studies.

PH 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.

PH 724. Advanced Methods in Epidemiology (3)  
Prerequisites: Public Health 601, 623, and 627.  
In-depth methodological issues in performance and interpretation of epidemiologic studies. Study design, cluster analysis, effect modification, accuracy and precision, adjustment of attributable risk; life tables, Kaplan-Meier, Cox proportional hazards modeling, and meta-analysis.

PH 726. HIV/AIDS Epidemiology and Public Health (3)  
Prerequisite: Public Health 601. Recommended: Public Health 621.  
State-of-the-art review of HIV and AIDS within a public health framework. Biology, transmission, host susceptibility, screening and surveillance, domestic and international epidemiology, study design, intervention, and options for prevention (including community-based trials).

PH 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.

PH 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.

PH 742A. Health Services Financial Management (3)  
Prerequisite: Graduate standing in public health.  

PH 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.

PH 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.

PH 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.

PH 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.

PH 748. Health Services Competitive Strategy and Marketing (3)  
Prerequisite: Public Health 648.  
Ways in which healthcare organizations can gain and sustain competitive advantage. Both organization and service level competition and strategies/tactics examined.

PH 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  
C. Environmental Health  
D. Health Management and Policy  
E. Health Promotion and Behavioral Science

PH 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.

PH 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.

PH 780. Global Health I (3)  
Prerequisites: Public Health 601 and 602.  
Principles of global health. Challenges of urbanization and migration to include demography, main causes of morbidity and mortality, including infectious agents; reproductive health; cultural diversity; and global preparedness.

PH 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.

PH 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 787. Research (1-3) Cr/NC/RP
Prerequisite: Consent of instructor.
Research in one of the fields of public health. Maximum credit six units applicable to a master’s degree. Maximum combined credit six units of Public Health 797 and 798 applicable to a master’s degree.
P H 798. Special Study (1-6) Cr/NC/RP
Prerequisite: Consent of staff, to be arranged with the director and instructor.
Individual study. Maximum credit six units applicable to a master’s degree. Maximum combined credit six units of Public Health 797 and 798 applicable to a master’s degree.
P H 799A. Thesis (3) Cr/NC/RP
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master’s degree.
P H 799B. Thesis Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of RP.
Registration required in any semester or term following assignment of RP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.
P H 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program courses.
Registration required of students whose only requirement is completion of the comprehensive examination for the master’s degree. Registration in 799C limited to two semesters.

DOCTORAL COURSES
P H 800. Seminar (1-9)
Prerequisite: Admission to the doctoral program.
Investigation of a particular topic or issue, emphasis on empirical research, topic to be announced in the Class Schedule. Maximum credit nine units applicable to a doctoral degree.
P H 823. Case-Control Studies (3)
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 851. Behavioral Measurement (3)
Techniques for assessing behaviors related to health and health risks in key content areas. Multimodel assessment and validation procedures. Students will demonstrate ability to create new measures based on theory and reliability and validity of these measures, using multimodel assessment procedures.
P H 862. Advanced Theoretical Foundations of Health Behavior Research and Applications (3)
Philosophy of science, role of theory development and design and conduct of research, with integration of behavioral and biological theories serving as foundation for behavioral science in public health.
P H 863. Advanced Communication Technology as Applied to Health Behavioral Interventions (3)
Prerequisites: Public Health 663, admission to the doctoral program, and consent of instructor.
Health communication theory and social marketing practice as applied to public health behavior change. Audience segmentation, formative research channel selection, and message development applied to chronic and infectious disease prevention.
P H 866. Global Issues in Health Behavior Research and Application (3)
Prerequisites: Admission to the doctoral program and consent of instructor.
Epidemics in infectious diseases, environmental degradation, population explosion, and other problems with behavioral links threaten the world’s population. Global issues such as the role of behavior in disease, bioterrorism, and war.
P H 887. 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 888. Seminar: Program Planning and Evaluation in International Settings (3)
Prerequisite: Public Health 780.
Theory and skills to evaluate research and service programs in international settings to include methods in program planning and evaluation, distinctions between research and evaluation, special considerations in cross-cultural settings, and transadaptation of planning and evaluation materials.
P H 897. Doctoral Research (1-15) Cr/NC/RP
Prerequisite: Admission to the doctoral program.
Independent investigation in the general field of the dissertation.
P H 898. Doctoral Special Study (1-9) Cr/NC/RP
Prerequisite: Admission to the doctoral program.
Individual study in the field of specialization. Maximum credit nine units applicable to the doctoral degree.
P H 899. Doctoral Dissertation (3-15) Cr/NC/RP
Prerequisites: An officially constituted dissertation committee and advancement to candidacy.
Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.
Regulatory Affairs

In the Center for Bio/Pharmaceutical and Biodevice Development and the College of Sciences

OFFICE: Geology/Mathematics/Computer Science 629
TELEPHONE: 619-594-0138 / FAX: 619-594-6381
E-MAIL: cbbd@sciences.sdsu.edu
http://www.cbbd.sdsu.edu

Graduate Adviser: Catherine J. Atkins, Ph.D.

Faculty Members of the Center for Bio/Pharmaceutical and Biodevice Development
*E. Dale Sevier, Ph.D., Director of the Center for Bio/Pharmaceutical and Biodevice Development

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, biologics, 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 submit the university application available at http://www.csumentor.edu along with the $55 application fee. All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Regulatory Affairs office.

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

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

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

Center for Bio/Pharmaceutical and Biodevice Development
The following materials should be mailed or delivered to:

Master of Science in Regulatory Affairs
Director of Regulatory Affairs Programs, CBBD
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4610

(1) Three letters of recommendation sent from persons who are knowledgeable about the candidate’s potential for success in graduate study.
(2) Applicant essay that describes the applicant’s purpose in pursuing graduate studies in regulatory affairs and relationship to personal and career objectives;
(3) List any employment or volunteer experience relevant to the proposed new degree major program.
Candidates for admission will typically come from one of the disciplines offered in the life and physical sciences and engineering. In some cases, candidates who have not fully completed the undergraduate requirements may be admitted with conditionally classified standing, subject to space availability, after consideration of those who meet the requirements for classified graduate standing. Students so admitted will be advised as to the nature of their deficiency and the time allowed to achieve full classified graduate standing. If the student’s undergraduate preparation is insufficient, the student will be required to take courses for removal of the deficiency. Courses taken to make up such deficiencies are in addition to the minimum units for the master’s degree and may not be included on the student’s program of study.

**Advancement to Candidacy**

All students must satisfy the general requirements for advancement to candidacy, as described in Part Four of this bulletin.

**Specific Requirements for the Master of Science Degree**

(Major Code: 49045) (SIMS Code: 779901)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the student must complete a graduate program consisting of a minimum of 39 units as follows:

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 771 Current Good Manufacturing Practices – Advanced Topics (3)
   - R A 773 Medical Device Regulations (3)
   - R A 775 Clinical Trials: Issues in Design, Conduct, and Evaluation (3)
   - R A 776 Validation Aspects of Drugs, Biologics, and Device Product Development and Manufacturing, Including Computer Related Systems and Software (3)
   - R A 778 Quality Control and Quality Assurance: Pharmaceutical, Biologics, and Medical Devices (3)
   - R A 779 International Regulatory Affairs (3)
   - R A 781 Ethics for Healthcare Professionals (3)
   - R A 797 Research (1-3) Cr/NC/RP
   - R A 798 Special Study (1-3) Cr/NC/RP

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**

(Offered through the College of Extended Studies)

(Major Code: 90701) (SIMS Code: 779902)

The Advanced Certificate in Regulatory Affairs involves the completion of Regulatory Affairs 601, 602, 770, and 781. Regulatory Affairs 601 covers the various steps in the development process for pharmaceuticals, biologics and medical devices, with an understanding of the regulatory impact on this process. Regulatory Affairs 602 provides a basic knowledge of the laws and regulations governing these industries. In Regulatory Affairs 770, students learn the basic concepts of good manufacturing practices. Regulatory Affairs 781 will examine some of the most significant ethical issues confronting healthcare professionals. To enroll in this certificate program, call 619-594-5152.

**Courses Acceptable on Master's Degree Program in Regulatory Affairs (R A)**

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

**GRADUATE COURSES**

- **R A 601. Pharmaceutical, Biotechnology, and Medical Device Industries (3)**
  - Prerequisite: Chemistry 365.
  - Pharmaceutical, biotechnology, and medical device industries. Company organization and product development and commercialization associated activities, e.g., drug discovery, chemical synthesis, quality assurance, regulatory affairs, manufacturing, control and marketing.

- **R A 602. Food and Drug Law (3)**
  - Prerequisite: Regulatory Affairs 601.
R A 605. Medical/Scientific Writing for Healthcare Professionals (3)
Prerequisite: Regulatory Affairs 601.
Writing for development of a new drug or biologic. Emphasis on effective writing of project reviews, research, reports, protocols, and CTDs.

R A 696. Advanced Topics in Regulatory Affairs (1-4)
Prerequisite: Regulatory Affairs 602.
Selected topics in regulatory affairs. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

R A 705. Project Planning for the Biomedical Industries (3)
Prerequisite: Regulatory Affairs 601.
Complexity of biomedical product development. Projects and strategies for effectively planning and managing them. Understanding and utilization of management and planning strategies as applied to these biomedical product development projects. Strategies for planning, scheduling, and effective management of regulatory affairs activities and related tasks associated with development of a biomedical product.

R A 750. Quality Improvement Management (3)
Prerequisite: Regulatory Affairs 602.
Controlling and facilitating change. Traditional quality tools and process improvement methods applied to biotechnology industry to create strong relationships with management and peers, communicate financial returns from a quality initiative, and selling benefits in a consultative manner.

R A 770. Current Good Manufacturing Practices - General Concepts (3)
Prerequisite: Regulatory Affairs 602.
Current Good Manufacturing Practice regulations to assure quality of marketed products. Application to manufacturer’s organization, personnel, facilities, equipment, control systems, production, process controls, laboratory procedures, and records.

R A 771. Current Good Manufacturing Practices - Advanced Topics (3)
Prerequisite: Regulatory Affairs 770.

R A 773. Medical Device Regulations (3)
Prerequisite: Regulatory Affairs 602.
Laws and FDA regulations for medical devices, in vitro diagnostics, radiological devices, FDA jurisdiction, registration, listing labeling requirements, classification, Investigational Device Exemptions (IDE), premarket approval (PMA) and premarket notification (510(R)).

R A 774. Investigational and Marketing Applications for Drugs, Biologics, and Medical Devices (3)
Prerequisite: Regulatory Affairs 602.
Development and informational content for investigational new drug applications (IND), investigational device exemptions (IDE), new drug applications (NDA), product license applications (PLA), and biologics license applications (BLA) for FDA review.

R A 775. Clinical Trials: Issues in Design, Conduct, and Evaluation (3)
Prerequisite: Regulatory Affairs 602.
Issues and requirements in design, conduct, and evaluation of clinical trials for new drugs, biologics, and medical devices. Introduction to biostatistics.

R A 776. Validation Aspects of Drugs, Biologics, and Device Product Development and Manufacturing, Including Computer Related Systems and Software (3)
Prerequisite: Regulatory Affairs 602.
Verification and validation of computer hardware, software, and peripherals for applications in pharmaceutical, biologic, and medical device industries.

R A 778. Quality Control and Quality Assurance: Pharmaceuticals, Biologics, and Medical Devices (3)
Prerequisite: Regulatory Affairs 602.
Review requirements, procedures, controls, and documentation for quality control and assurance in manufacture and commercial distribution of drugs, biologics, and medical devices.

R A 779. International Regulatory Affairs (3)
Prerequisite: Regulatory Affairs 602.
International medical device regulations pertaining to pharmaceuticals, biologics, and devices. Emphasis on European union and other appropriate areas of the world.

R A 781. Ethics for Healthcare Professionals (3)
Prerequisite: Regulatory Affairs 602.
Ethical issues confronting healthcare professionals. Moral positions concerning impact on laboratory animals, human subjects, patients, and consumers, both on a case-specific level and as applied to field in general. Develop capacities to generalize, translate, and apply principles and ideas to modern biomedical practice.

R A 783. Effective Communication for Healthcare Professionals (3)
Prerequisite: Regulatory Affairs 601.
Written, oral, and interpersonal communication strategies for the business environment with emphasis on regulatory affairs.

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

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

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

R A 799B. Thesis or Project Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade of RP.
Registration required in any semester or term following assignment of RP in Course 799A in which the student expects to use the facilities and resources of the university; also students must be registered in the course when the completed thesis or project is granted final approval.
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
Risa Levitt, Ph.D., Professor of Religious Studies, Chair of Department
Christopher Frost, Ph.D., Professor of Religious Studies and
Associate Dean of the Division of Undergraduate Studies
Rebecca E. Moore, Ph.D., Distinguished Professor of Religious Studies
Wilburn N. Hansen, Ph.D., Associate Professor of Religious Studies
Khaleel Mohammed, Ph.D., Associate Professor of Religious Studies
Sthaneshwar Timalsina, Ph.D., Associate Professor of Religious Studies

General Information
The department offers advanced coursework in religious studies which may be used toward fulfilling advanced degree requirements in Interdisciplinary Studies and in other departments with the approval of the student's graduate adviser.

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

UPPER DIVISION COURSES
REL S 507. The Reformation (3)
(Same course as History 507)
Continental Europe, 1500-1648. Split of Christendom; political and intellectual dissent; social fabric of family life; relationship between gender, class, and power; cultural stratification of European society.

REL S 580. Major Figure (3)
Prerequisite: Three units of religious studies.
Life, works, and significance of one major figure in a religious tradition. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

REL S 581. Major Theme (3)
Prerequisites: Three units of religious studies and upper division or graduate standing.
Advanced systematic study of a theme or motif selected from major religious traditions. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

REL S 582. Major Text (1-3)
Prerequisites: Three units of religious studies and upper division or graduate standing.
Advanced systematic study of a selected scripture or classic text(s) selected from one of the major religious traditions. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

REL S 583. Major Tradition (3)
Prerequisites: Three units of religious studies and upper division or graduate standing.
Advanced systematic study of the doctrines, practices, and development of a major religious tradition. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

REL S 596. Advanced Topics in Religious Studies (1-3)
Prerequisite: Consent of instructor.
Advanced selected topics in religious studies. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES
REL S 696. Seminar in Selected Topics (3)
Prerequisite: Twelve upper division units in religious studies. Directed research in a major problem or movement in religious studies. May be repeated with new content. See Class Schedule for specific content. 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.

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. Ornalewski, 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, Emeritus, Graduate Program Director
Christopher Werry, Ph.D., Associate Professor of Rhetoric and Writing Studies, Lower Division Writing Director
Paul A. Minifie, 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.

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 in disciplinary and cultural communities, and professional work. The program builds on the diverse interests of faculty in the Department of Rhetoric and Writing Studies to bring together rhetorical theory, history of rhetoric, composition studies, literacy, writing pedagogy, discourse theory, professional writing, and writing in the disciplines to provide a coherent platform for inquiry into the diverse ways in which literacy and writing are used in academic, professional, and cultural contexts. The graduate program can prepare students for a teaching career.

The Master of Arts degree in rhetoric and writing studies is a 30-unit program that provides preparation for students wanting to pursue doctoral-level study in the area of rhetoric and writing studies or in related disciplines or for students who plan to terminate their studies at the M.A. level. In addition to a general program, the curriculum also offers specializations in the teaching of writing and in professional writing.

The specialization in the teaching of writing prepares students to teach writing in colleges and furthers the professional development of secondary school teachers. The specialization in professional writing prepares students for careers as professional writers in business, industry, public agencies, and government within the broader disciplinary context of rhetoric and writing studies, as well as to teach technical and professional writing at colleges or in specific training settings.

The program includes a teaching internship for students in the teaching of writing specialization and a technical writing internship for students in the technical and professional writing specialization and, where appropriate, special study based on work experience.

Admission to Graduate Study
Students will be admitted in both the fall and spring semesters. Applications should be submitted by April 1 for the fall and by November 1 for the spring.

To be admitted into the program, students must satisfy the general requirements for admission to graduate study at the university with classified graduate standing, as described in Part Two of this bulletin. In addition applicants must have a GPA of at least 3.0 in the last 60 semester units (90 quarter units) attempted in their bachelor’s degree studies.

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

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

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

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

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

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

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

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

Department of Rhetoric and Writing Studies
The following materials should be mailed or delivered to:

Department of Rhetoric and Writing Studies
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4452

(1) Letter of application;
(2) A 750-1000 word statement of purpose;
(3) A writing sample (minimum 10 pages total, in one or separate documents);
(4) Three letters of recommendation.

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy, including the foreign language requirement, as stated in Part Four of this bulletin. With the approval of the graduate adviser, each candidate may fulfill the foreign language requirement in one of several ways: 1) by passing a local examination administered by one of the university’s foreign language departments, 2) by completing one three-unit upper division foreign language or literature course with a grade of C or better, or 3) by passing an examination to be determined by the graduate adviser if the chosen language is not one taught in a department at San Diego State University.
Specific Requirements for the Master of Arts Degree  
(Major Code: 15013)
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, a student must complete a program of study approved by the department's graduate adviser. The program must consist of at least 30 units, with at least 18 units of 600- and 700-level courses.

**General Program**  
(SIMS Code: 112201)

<table>
<thead>
<tr>
<th>Required courses (15 units):</th>
</tr>
</thead>
<tbody>
<tr>
<td>RWS 600 Reading and Writing Rhetorically (3)</td>
</tr>
<tr>
<td>RWS 601A History of Rhetoric I (3)</td>
</tr>
<tr>
<td>RWS 602 Modern Rhetoric and Composition Studies (3)</td>
</tr>
<tr>
<td>RWS 640 Research Methods in Rhetoric and Writing Studies (3)</td>
</tr>
<tr>
<td>RWS 790 M.A. Examination Preparation (3) Cr/NC</td>
</tr>
<tr>
<td>or</td>
</tr>
<tr>
<td>RWS 799A Thesis or Project (3) Cr/NC/RP</td>
</tr>
</tbody>
</table>

**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)

<table>
<thead>
<tr>
<th>Required courses (21 units):</th>
</tr>
</thead>
<tbody>
<tr>
<td>RWS 600 Reading and Writing Rhetorically (3)</td>
</tr>
<tr>
<td>RWS 601A History of Rhetoric I (3)</td>
</tr>
<tr>
<td>RWS 602 Modern Rhetoric and Composition Studies (3)</td>
</tr>
<tr>
<td>RWS 609 Theory and Practice of Teaching Composition (3)</td>
</tr>
<tr>
<td>RWS 640 Research Methods in Rhetoric and Writing Studies (3)</td>
</tr>
<tr>
<td>RWS 796A Teaching Internship (3) Cr/NC</td>
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<tr>
<td>or</td>
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<tr>
<td>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</td>
</tr>
<tr>
<td>or</td>
</tr>
<tr>
<td>RWS 799A Thesis or Project (3) Cr/NC/RP</td>
</tr>
</tbody>
</table>

**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)

<table>
<thead>
<tr>
<th>Required courses (24 units):</th>
</tr>
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<tbody>
<tr>
<td>RWS 504 Advanced Professional Writing (3)</td>
</tr>
<tr>
<td>RWS 505 Writing Project Management (3)</td>
</tr>
<tr>
<td>RWS 600 Reading and Writing Rhetorically (3)</td>
</tr>
<tr>
<td>RWS 601A History of Rhetoric I (3)</td>
</tr>
<tr>
<td>RWS 602 Modern Rhetoric and Composition Studies (3)</td>
</tr>
<tr>
<td>RWS 640 Research Methods in Rhetoric and Writing Studies (3)</td>
</tr>
<tr>
<td>RWS 796B Writing Internship (3)</td>
</tr>
<tr>
<td>or</td>
</tr>
<tr>
<td>RWS 798 Special Study (3) Cr/NC/RP (Based on work experience, where appropriate and with the approval of the Department of Rhetoric and Writing Studies graduate adviser)</td>
</tr>
<tr>
<td>or</td>
</tr>
<tr>
<td>RWS 799A Thesis or Project (3) Cr/NC/RP</td>
</tr>
</tbody>
</table>

**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.

<table>
<thead>
<tr>
<th>Required courses (6 units):</th>
</tr>
</thead>
<tbody>
<tr>
<td>RWS 600 Reading and Writing Rhetorically (3)</td>
</tr>
<tr>
<td>RWS 609 Teaching Composition in Secondary Schools (3)</td>
</tr>
<tr>
<td>or</td>
</tr>
<tr>
<td>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</td>
</tr>
</tbody>
</table>

**Electives** (6 units)
Three units selected from:
- RWS 601A History of Rhetoric I (3)
- RWS 601B History of Rhetoric II (3)
- RWS 602 Modern Rhetoric and Composition Studies (3)
- RWS 640 Research Methods in Rhetoric and Writing Studies (3)

The certificate adviser in the Department of Rhetoric and Writing Studies is responsible for evaluating applications and advising students.

Up to 12 units of coursework taken as part of the certificate program, with the approval of the graduate adviser, may be applied to the Master of Arts degree in rhetoric and writing studies with a specialization in the teaching of writing.

Courses Acceptable on Master's Degree Program in Rhetoric and Writing Studies (RWS)
Refer to Courses and Curricula and Regulations of the Division of Graduate Affairs sections of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

**UPPER DIVISION COURSES**

- **RWS 500W. Advanced Writing Strategies (3)**  
Prerequisites: Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units; completed Writing Placement Assessment with a score of 8 or higher (or earned a C or higher in RWS 280, 281, or LING 281 if score on WPA was 7 or lower); and completed General Education requirements in Composition and Critical Thinking.  
Proof of completion of prerequisites required:  
Test scores or verification of exemption; copy of transcript.  
Advanced writing course focusing on how meaning is negotiated and claims are argued in academic and public discourse.

- **RWS 501. Editing (3)**  
Prerequisite: Rhetoric and Writing Studies 305W or 500W.  

- **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, 496; 596 courses applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

RWS 599. Special Study (1-3) Cr/NC
Directed individual study. Maximum credit six units.

GRADUATE COURSES

RWS 600. Reading and Writing Rhetorically (3)
Theoretical frameworks, including rhetorical theory and discourse analysis, for analyzing and interpreting academic, professional, and everyday texts. Critical reading and writing of texts and rhetorical dimensions of knowledge production.

RWS 601A. History of Rhetoric I (3)
Prerequisite: Good standing in an approved graduate program.
Major works of rhetoric from Greek Sophists through Imperial Rome. Themes and core concepts that shape the discipline of rhetoric. How the works informed pedagogy and public life. Relationship of historical texts to contemporary rhetorical practices.

RWS 601B. History of Rhetoric II (3)
Prerequisite: Good standing in an approved graduate program.
Major works of rhetoric from medieval period through the nineteenth century. Themes and core concepts that shape the discipline of rhetoric. How the 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)
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 assignments in Rhetoric and Writing Studies.

RWS 610. Disciplinary Rhetorics (3)
Practice in and analysis of professional academic discourse, including major genres of disciplinary writing; strategies of written inquiry, argument, and professional conversation; cultural norms of professional practice.

RWS 640. Research Methods in Rhetoric and Writing Studies (3)
Prerequisites: Rhetoric and Writing Studies 600, 601A, 602.
Research methods and critical approaches to advanced study of rhetoric and writing; with attention to basic reference works, scholarly journals, and bibliographical techniques.

RWS 696. Topics in Rhetoric and Writing Studies (3)
Intensive study in specific areas of rhetoric and writing studies. May be repeated with new content and consent of instructor. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

RWS 740. Feminist Rhetorics (3)
Prerequisites: Rhetoric and Writing Studies 600, 601A, 602.
Gender’s interface with epistemology, authorship, and teaching. Contemporary issues related to feminist creation and critique of knowledge-construction, discourse, pedagogical, and research methods.
RWS 744. Seminar in Issues in Rhetorical Theory and Practice (3)
Prerequisites: Rhetoric and Writing Studies 600, 601A, 602.
Problems in teaching of rhetoric and writing, both practical and theoretical. Advanced study of topics such as teaching practices, genres, stylistics, or a major figure. May be repeated with new content. Maximum credit six units.

RWS 750. Rhetorics of Science and Technology (3)
Prerequisites: Rhetoric and Writing Studies 600, 601A, 602.
Rhetorical approaches to scientific and technical work, knowledge, texts, and debates. Includes rhetorical studies of workplace writing in organizational contexts.

RWS 790. M.A. Examination Preparation (3) Cr/NC
Prerequisites: Twenty-four units of graduate coursework that counts toward the M.A. degree in rhetoric and writing studies. Student must be in final semester of study for master's degree.
Survey of selected essays, articles, and texts in rhetoric, composition studies, and professional and technical writing included in the M.A. examination. Emphasis on rhetorical analysis of texts and contexts (historical, social, professional, and technical). Strongly recommended for students taking the M.A. examination.

RWS 796A. Teaching Internship (3) Cr/NC
Prerequisites: Completion of Rhetoric and Writing Studies 609 and consent of graduate adviser.
Teaching experience while student is under joint supervision of college-level teacher and academic instructor. Maximum credit three units.

RWS 796B. Writing Internship (3) Cr/NC
Prerequisites: Rhetoric and Writing Studies 501, 504, 600, 601A, 602, and consent of graduate director.
Intensive experience in writing and editing documents while student is under joint supervision of an academic instructor and a professional coordinator. Maximum credit three units applicable to a master's degree.

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

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

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

RWS 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program courses.
Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.
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: Anne Donadey, Ph.D.
Faculty
Veronica Shapovalov, Ph.D., Professor of Russian

General Information
The Department of European Studies offers coursework in Russian which may be used toward fulfilling advanced degree requirements in Interdisciplinary Studies and other departments with the approval of the student's graduate adviser.

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

UPPER DIVISION COURSES
NOTE: All upper division courses in Russian are taught in Russian unless otherwise stated.

RUSSN 501. Translation (3)
Prerequisite: Russian 301.
Comparison of Russian and English through translation of a variety of texts from Russian to English and from English to Russian.

RUSSN 570. Issues in Russian Literary and Cultural Studies (3)
Prerequisites: Russian 301 and 305A or 305B.
Themes within literary, intellectual, and cultural movements in Russian literature of the nineteenth to twenty-first centuries. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

RUSSN 596. Topics in Russian Studies (3)
Prerequisite: Russian 305B (for literary topics). Proof of completion of prerequisite required: Copy of transcript.
Topics in Russian language, literature, or linguistics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES
RUSSN 696. Topics in Russian Studies (3)
Intensive study in specific areas of Russian. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

RUSSN 798. Special Study (1-3) Cr/NC/RP
Prerequisites: Eighteen upper division units in Russian and consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units applicable to a master's degree.
Social Work
In the College of Health and Human Services

OFFICE: Hepner Hall 119
TELEPHONE: (619) 594-6865

Accredited by the Council on Social Work Education.

Faculty
Thom Reilly, D.P.A., Professor of Social Work,
Director of School
Daniel J. Finnegan, Ph.D., Associate Professor of Social Work,
Associate Director of School
John D. Clapp, Ph.D., Professor of Social Work
Melinda M. Hohman, Ph.D., Professor of Social Work
Loring P. Jones, D.S.W., Professor of Social Work
Audrey M. Shillington, Ph.D., Professor of Social Work
Susan I. Woodruff, Ph.D., Professor of Social Work
Mark B. Reed, Ph.D., Assistant Professor of Social Work
Yawen Li, Ph.D, Assistant Professor of Social Work
Eunjeong Ko, Ph.D., Assistant Professor of Social Work
Loring P. Jones, D.S.W., Professor of Social Work
Melinda M. Hohman, Ph.D., Professor of Social Work
John D. Clapp, Ph.D., Associate Professor of Social Work
Jong Won Min, Ph.D., Associate Professor of Social Work
Thomas R. Packard, D.S.W., Associate Professor of Social Work
Lucinda A. Rasmussen, Ph.D., Associate Professor of Social Work
Olita D. Harris, Ph.D., Associate Professor of Social Work and
Associate Dean of the College of Health and Human Services
Sally G. Mathiesen, Ph.D., Associate Professor of Social Work
Yiwei Li, Ph.D, Assistant Professor of Social Work
Mark B. Reed, Ph.D., Assistant Professor of Social Work

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

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

(1) Official transcripts (in sealed envelopes) from all
postsecondary institutions attended;
Note:
• Students who attended SDSU need only submit 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) English language score, if medium of instruction was in a
  language other than English (http://www.ets.org, SDSU
  institution code 4682).

Master of Social Work Degree
The following materials should be mailed or delivered to:
School of Social Work
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4452

(1) Departmental application available at:
http://socialwork.sdsu.edu/applying.php;
(2) Letters of recommendation;
(3) Personal statement.

Master of Social Work Degree and Juris Doctor Degree
The following materials should be mailed or delivered to:
School of Social Work
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4452

(1) Departmental application available at:
http://socialwork.sdsu.edu/applying.php;
(2) Letters of recommendation;
(3) Personal statement;
(4) Contact the Office of Admissions at California Western School
  of Law at 619-525-1463 for a separate application.

Master of Social Work Degree and
Master of Public Health Degree
The following materials should be mailed or delivered to:
School of Social Work
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4119

(1) Submit a narrative statement as described in Instructions for
  Applicants;
(2) Submit three letters of recommendation.

Master of Social Work Degree

General Information
The School of Social Work offers a 38-60 unit year accredited
graduate program leading to a Master of Social Work (MSW) degree.
Coursework is typically completed in one to four years. The program
qualifies students to apply for the Licensed Clinical Social Worker
(LCSW) certification process by the Board of Behavioral Science
Examiners of the State of California.

Students may earn the Master of Social Work degree in one of two
ways described below. Students who have earned an undergraduate
social work degree from an accredited university may be eligible to
complete the requirements for the Master of Social Work degree via the
38 unit advanced standing program. All other students are required to
complete the standard 60 units Master of Social Work program.

The goal of the Master of Social Work degree is to prepare
advanced practitioners who: are prepared to be leaders in the
profession; who have multiple skills that can be used in a wide variety
of settings and with systems of various sizes; who are well-grounded in
the values and ethics of the profession; who are committed to life
long professional development. Special emphasis is currently given to
those human needs that relate to the continuum of health care and
well-being, families in transition, and social/environmental factors that
create stress as it relates to individuals and groups in the home,
workplace, and community.

The school is extensively involved in local, state, and national
human service issues through individual faculty research and
community intervention programs. In addition, the school has made
commitments in the area of chemical dependency research and
practice through the Center for Alcohol and Other Drug Studies and
policy research and intervention through the Social Policy Institute.
Admission to the Degree Curriculum

General Admission Requirements

All applicants must file two separate applications: one to the Office of Enrollment Services to include transcripts, GRE scores, and English language scores if applicable, and one to the School of Social Work. The School of Social Work will not consider any applicant who has not filled both required applications. Specific university admission requirements and procedures are outlined in Part Two of this bulletin. Specific School of Social Work requirements and procedures are outlined in the admissions packet as well as on the School of Social Work Web site at http://chs.sdsu.edu/sw.

Please be advised that the school does not accept life/work experience in lieu of any course requirements. The school does not accept transfer credit based on life/work experience. Students will have to reattempt any courses for which life/work experience was counted.

In addition to the regular application material, the university requires all applicants to take the Graduate Record Examination for admission. Scores must be reported to both the university and the School of Social Work. Applicants will not be reviewed by the school unless GRE scores are on file. Applicants must have taken and successfully passed one course in statistics and a liberal arts foundation at the undergraduate or graduate level.

The school cannot accept any student into the program until the university has accepted them into graduate study. For this reason, we urge interested students to submit both applications as early as possible.

Advanced Standing Program Admission Requirements

The School of Social Work admits new students to the advanced standing program only in the summer each academic year. Applications are accepted between November 1 and January 15 of the preceding academic year.

Students admitted to the advanced standing program must possess an undergraduate degree in social work that was earned within five years of admission to the advanced standing program. The undergraduate degree must come from a program that is accredited by the Council on Social Work Education and the cumulative GPA for social work courses taken must be at least 3.0 (B or better).

Students not admitted to the advanced standing program may be considered for admission to the standard 60 unit program.

Standard 60 Unit Master of Social Work Admission Requirements

The School of Social Work admits new students to the standard 60 unit Master of Social Work program only in the fall of each academic year. To be guaranteed a space in the two year program, new students must apply between November 1 and January 15 of the year before the desired year of entry. Applications received after the January 15 deadline but before April 1, will be considered for admission to the two, three, or four year programs if space is available. Students currently enrolled or on leave of absence from CSWE accredited schools of social work are considered transfer students and can apply to the program for either fall or spring admission.

Advancement to Candidacy

Advanced Standing Program

All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin. In addition, the student must (1) have satisfactorily completed the six unit foundation bridge courses (SWORK 670 and 671) with a minimum grade of B; (2) have earned at least 24 units of post-baccalaureate study with a minimum grade point average of 3.0 (B) and received a grade of satisfactory progress (SP) or credit (CR) in four units of SWORK 750 or 755; (3) have no incomplete grades; (4) be recommended by the faculty of the School of Social Work; (5) be approved for advancement by the Division of Graduate Affairs.

Standard 60 Unit Master of Social Work Program

All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin. In addition, the student must (1) have earned at least 24 units of post-baccalaureate study with a minimum grade point average of 3.0 (B) and received credit (CR) in field practicum; (2) have no incomplete grades; (3) be recommended by the faculty of the School of Social Work; (4) be approved for advancement by the Division of Graduate Affairs; (5) successfully pass a written qualifying examination given during the spring semester in which the student completes 31 units of 600-level coursework.

Specific Requirements for the Master of Social Work Degree

(Major Code: 21041) (SIMS Code: 558201)

Advanced Standing Program

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree in Part Four of this bulletin, the student must complete an officially approved 38 unit course of study to include:

1. Six units in generalist/foundation bridge courses (SWORK 670 and 671);
2. Three units of computer applications for social work (SWORK 610);
3. 29 units of advanced study, to include:
   a. 0-3 units of advanced human behavior (SWORK 720);
   b. 3 units of advanced social policy (SWORK 702);
   c. 3 units of advanced research methods (SWORK 791 or 797);
   d. 6-9 units of social work electives (SWORK 758, 780, 781, 798, 799A);
   e. 14 units in a Social Work Methods Focus Area (Direct Practice or Administration and Community Development).

   (SIMS Code: 558207)

   (SIMS Code: 558206)

Direct Practice

SWORK 739 (3)
SWORK 744 (3)
SWORK 750 (8)

OR

Administration and Community Development

SWORK 720 (3)
SWORK 740 (3)
SWORK 755 (8)

In addition to the above courses, students must complete either a Thesis (Plan A) or a comprehensive written examination (Plan B). Students completing Plan A may count Social Work 799A as three units of elective.

At least 30 units of the program must be completed in residence at San Diego State University. A maximum of six units is transferable from another accredited graduate program in social work.

Six units of elective credit may be taken from other schools or departments within the university with the consent of the graduate adviser. See student handbook for specific elective policies. To receive the degree, students must earn a 3.0 (B) grade point average in academic courses and demonstrate professional competence for required practicum (CR for all semesters).

In addition, the National Association of Social Workers (NASW) Code of Ethics represents the professional standards of the MSW program. The NASW Code of Ethics is available in the student handbook. All students are expected to know and adhere to its principles of professional conduct. Students who knowingly or unknowingly violate any part of the ethical code may be dismissed from the program without further qualification regardless of coursework, research, or other academic achievement.

Standard 60 Unit Master of Social Work Program

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree in Part Four of this bulletin, the student must complete an officially approved 60 unit course of study to include:

1. 28 units in generalist/foundation bridge courses (SWORK 601, 619, 620A, 630, 631, 632, 650, 690);
2. Three units of computer applications for social work (SWORK 610);
3. 29 units of advanced study, to include:
   f. 0-3 units of advanced human behavior (SWORK 720);
   g. 3 units of advanced social policy (SWORK 702);
   h. 3 units of advanced research methods (SWORK 791 or 797);
   i. 6-9 units of social work electives (SWORK 758, 780, 781, 798, 799A);
   j. 14 units in a social work methods focus area (Direct Practice or Administration and Community Development).
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://chths.sdsu.edu/sw.

Program of Study
Advanced Standing Program
The first nine units of the advanced standing program taken during the summer semester are organized around the generalist/foundation of social work practice. The final 29 units commencing in the fall are organized around a methods focus area. Students will select one of the methods focus areas.

Standard 60 Unit Master of Social Work Program
The standard 60 unit Master of Social Work program is organized in the first year around the generalist/foundation courses. The second year program is organized around a methods focus area. Students will select one of the methods focus areas described below during the semester before beginning the second year of the program.

Methods Focus Areas
Direct Practice Social Work
Focus is on interpersonal conflicts and social functioning with emphasis on appropriate intervention methods used primarily with individuals, families, and groups. Emphasis is placed on a problem-solving framework that utilizes assessment/diagnosis, intervention/treatment and evaluative skills.

Social Work Administration and Community Development
Focus is on designing and managing human service organizations, engaging communities, forming partnerships, building institutional relationships, and enhancing social capital. Areas of emphasis include administration, financial management, information systems, leadership, organizational change, supervision or Community Development (community organizing, neighborhood improvement and problem solving, international social work, immigration issues). Electives must be approved by the adviser.

Field of Service
In addition to the methods focus of the program of study, the curriculum provides students the opportunity to develop knowledge and skills in a specialized field of service while meeting their advanced human behavior, advanced social policy, advanced field practicum, and elective requirements. Students, with guidance from the graduate adviser and a faculty member serving as a professional mentor, select coursework that address their specific educational and career goals. Based on the current strengths of the school’s faculty, students can use their coursework and their field practicum to develop specialized knowledge in the areas of child welfare, family services, mental health, aging, substance abuse, and health. In addition, students may use thesis research to extend their knowledge in one of these areas.

Master of Social Work Degree and Juris Doctor Degree

General Information
The School of Social Work and the California Western School of Law offer a four-year concurrent graduate program which allows students to earn simultaneously a Master of Social Work and a Juris Doctor (JD) degree in law. The objective of the concurrent degrees program is to prepare students who are competent in advanced practice where social work and law converge.

Admission to the Degree Curriculum
To request application materials for the concurrent dual degrees program in social work and law, applicants should contact the Office of Admissions at the School of Social Work, San Diego State University and the Office of Admissions at California Western School of Law. Two separate application processes must be followed. Please see the Admission to Graduate Study section in this bulletin under the Master of Social Work degree program. (The only difference is that students earning the two degrees simultaneously may substitute the results of the LSAT examination for the GRE examination.) Applicants should indicate on the appropriate section of each application that they are applying for the concurrent dual degrees MSW/JD program.

Advancement to Candidacy
All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin. In addition, students must also meet all criteria outlined under the Advancement to Candidacy section for the Master of Social Work program.

Specific Requirements for the MSW/JD Concurrent Degree Program
(Major Code: 21045) (SIMS Code: 558280)
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin and all the requirements listed in the California Western School of Law catalog for the JD degree, the student must complete an officially approved course of study as outlined below.

School of Social Work
(60 Units—Including six units transferred from California Western School of Law)
SWORK 601 Seminar in Social Welfare Policy and Services (3)
SWORK 619 Human Behavior in the Social Environment (3)
SWORK 620A Seminar in Human Behavior and the Social Environment (3)
SWORK 630 Social Work Practice: A Generalist Perspective (3)
SWORK 631 Social Work Practice: Individuals, Families, and Groups (3)
SWORK 632 Social Work Practice: Organizations and Communities (3)
SWORK 650 Field Practicum (7) Cr/NC
SWORK 690 Seminar in Social Work Research Methods (3)
SWORK 702 Seminar in Social Welfare Policy and Services (3)
SWORK 720 Seminar in Selected Topics in Human Behavior and Social Environment (3)
SWORK 797 Research (3) Cr/NC/RP
SWORK 799A Thesis (3) Cr/NC/RP
Electives: Six units transferred from California Western School of Law courses and six units in a second year practice concentration.

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Social Work

Direct Practice
(SIMS Code: 558208)
SWORK 739 (3)
SWORK 744 (3)
SWORK 750 (6)

OR

Administration and Community Development
(SIMS Code: 558209)
SWORK 720 (3)
SWORK 740 (3)
SWORK 755 (6)

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 4 (Spring) California Western School of Law only
Year 4 Both Schools

Master of Social Work Degree and Master of Public Health Degree

General Information
The School of Social Work and the Graduate School of Public Health offer a three year concurrent graduate program leading to a Master of Social Work and a Master of Public Health. The objective of the concurrent program is to offer preparation in the fields of public health and social work. Students in this concurrent program must select the social work administration methods focus area.

Admission to the Degree Curriculum
For additional admission information refer to Admission to Graduate Study for the MSW. In order to be considered for the concurrent MSW/MPH program, applicants must meet the general requirements for admission to graduate study at the university (see Part Two of this bulletin) and have a minimum 2.85 grade point average in the last 60 semester or 90 quarter units in undergraduate work completed. Undergraduate preparation in at least one of the following areas is preferred: social work, social or behavioral sciences, or health science. A satisfactory score on the GRE General Test is required. Applicants already holding another master’s degree or higher degree from an acceptable accredited graduate school are exempt from the GRE.

A committee composed of faculty from Social Work and Public Health will make all admission recommendations to the dean of the Division of Graduate Affairs.

Advancement to Candidacy
All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin. All core courses in social work and public health must be completed prior to advancement. In addition, the student must: (1) have earned at least 24 units of graduate study within the concurrent program with a minimum grade point average of 3.0 and no grade less than a B– in each core course (applies to Public Health courses only); (2) have been recommended for advancement by the combined faculty advisory committee; received credit (Cr) in field practicum; (3) have a thesis proposal approved by the combined faculty advisory committee.

Upon advancement to candidacy, the student will enroll in Social Work 797 (Research), Public Health 797 (Research), and Social Work 799A (Thesis) or Public Health 799A (Thesis). A thesis (Plan A) incorporating theory, method, and analytic techniques from both disciplines is the culminating experience for the concurrent program leading to the MSW and MPH degrees.

Specific Requirements for the MSW/MPH Degree
(Major Code: 12991) (SIMS Code: 998210)
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete an officially approved course of study of not less than 89 units as outlined below.

Social Work/Public Health-Health Management and Policy (SIMS Code: 998220)
SWORK 601 Seminar in Social Welfare Policy and Services (3)
SWORK 619 Human Behavior in the Social Environment (3)
SWORK 620A Seminar in Human Behavior and Social Environment: Direct Practice (3)
SWORK 630 Social Work Practice: A Generalist Perspective (3)
SWORK 631 Social Work Practice: Individuals, Families, and Groups (3)
SWORK 632 Social Work Practice: Organizations and Communities (3)
SWORK 650* Field Practicum (7) Cr/NC
SWORK 690 Seminar in Social Work Research Methods (3)
SWORK 740 Advanced Seminar in Social Work Administration and Community Development (3)
SWORK 745 Advanced Seminar in Selected Topics in Social Work Administration (3)
SWORK 755* Advanced Field Practicum: Social Work Administration and Community Development (8) Cr/NC/RP

SWORK 797 Research (3) Cr/NC/RP
P H 601 Epidemiology (3)
P H 602 Biostatistics (3)
P H 604 Environmental Determinants of Human Health (3)
P H 641 Introduction to Health Services (3)
P H 644 Health Services Organization and Management (3)
P H 645 Health Economics (3)
P H 647 Quantitative Methods and Health Data Analysis (3)
P H 648 Health Policy (3)
P H 742A Health Services Financial Management (3)
P H 742B Health Insurance and Financing Systems (3)
P H 747 Quality Improvement and Program Evaluation (3)
P H 748 Health Services Competitive Strategy and Marketing (3)
P H 797 Research (3) Cr/NC/RP
P H 799A or Thesis (3) Cr/NC/RP
SWORK 799A Thesis (3) Cr/NC/RP
Electives: Three units of social work electives.

Transfer units will not be accepted toward the concurrent MSW/MPH degree program. Graduate study or degrees obtained previously will not be accepted toward meeting the unit requirements of the concurrent MSW/MPH degree program.

If a student, after entering the concurrent MSW/MPH program returns to a single degree program, all of the requirements for the single degree program must then be met.

* Social Work 650 and 755 must have the approval of the faculty advisory committee. Responsibility for faculty field supervision will be assigned in social work.
Certificate in Social Work Administration
(Major Code: 90055) (SIMS Code: 558220)
Offered by the School of Social Work, the Advanced Certificate in Social Work Administration provides the following objectives:
- Enhance the skills and career prospects for students with a Master of Social Work degree who have moved into, or are interested in moving into, administrative positions in human service organizations;
- Enhance the talent pools for human service organizations that prefer managers and leaders with knowledge and skills in administrative practice and a strong grounding in clinical or direct practice service delivery;
- Contribute to increasing effectiveness of human service organizations in both client outcomes and management capacity.
Applicants to this program must possess a Master of Social Work in Clinical or Direct Practice. Applicants with other master’s degrees in human services field may be considered on a case-by-case basis.
The following courses must be completed with a grade point average of 3.0 or above:
SWORK 740. Advanced Seminar in Social Work Administration (3)  
SWORK 745. Advanced Seminar in Selected Topics in Social Work Administration (3)
SWORK 758. Seminar in Social Work and Selected Fields of Practice: Information Systems and Knowledge Management (3)  
Up to 12 units of completed certificate courses with a grade of B or better may be applicable to the Master of Social Work degree with the approval of the graduate adviser.
For further information, contact the program adviser, Dr. Thomas R. Packard, School of Social Work, tpackard@mail.sdsu.edu or 619-594-6723.

Pupil Personnel Services Credential
The School of Social Work is accredited by the State of California Department of Education to offer the Pupil Personnel Services Credential in School Social Work and the Pupil Personnel Services Credential in Child Welfare and Attendance. The credentials can be awarded under two conditions:
1. As part of the regular MSW program being completed during the second year coursework. Students would be assigned to a second year SWORK 750 internship in an approved and supervised school placement. In addition, students must take SWORK 758 (School Social Work) as their fall elective course, and SWORK 758 (Practice in the Educational Arena) as their spring elective course.
2. As a post MSW student through the College of Extended Studies. Interested professionals must contact the PPS coordinator and apply for the program which consists of 14 units taken over two semesters beginning in the fall of each year. The program includes SWORK 758 (School Social Work—3 units), SWORK 758 (Practice in the Educational Arena—3 units), and SWORK 750 (4 units) each semester. SWORK 750 is a 20-hour per week internship required to accumulate the necessary time for the credential.

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: dfinnegan@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 Social Welfare Policy and Services (3)
Prerequisite: Social Work 601.
Selected social welfare policies used to examine processes of policy formulation, policy analysis skills, and relationships of policy decisions and indecisions to outcomes of social welfare interventions. Maximum credit six units applicable to a master's degree.

SWORK 720. Seminar in Selected Topics in Human Behavior and Social Environment (3)
Prerequisite: Social Work 620A.
Selected topics related to current theories of natural and induced change in human behavior which have utility for social work practice within fields of service. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to a master's degree.

SWORK 739. Advanced Seminar in Social Work Practice with Families (3)
Prerequisites: Social Work 744 and concurrent registration in Social Work 750.
Family dynamics and social work practice related to family change.

SWORK 740. Advanced Seminar in Social Work Administration and Community Development (3)
Human services program design, strategic planning, marketing, organizational performance management, human resource management, and development of grant proposals.

SWORK 744. Advanced Seminar in Selected Topics in Direct Practice Social Work (3)
Prerequisites: Social Work 631, 632, and concurrent registration in Social Work 750.
Study of a selected aspect of direct practice social work. Topics include treatment methodology, theoretical approaches, levels of practice, specific client groups, or special problem areas. See Class Schedule for specific content.

SWORK 745. Advanced Seminar in Selected Topics in Social Work Administration (3)
Study of selected aspects of administration in human services organizations to include leadership, organizational learning, organizational change management, and supervision. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

SWORK 750. Advanced Field Practicum: Direct Practice Social Work (4) Cr/NC/RP
Prerequisites: Social Work 650 and concurrent registration in Social Work 739 or 740 and 744 or 745.
Advanced field instruction in public or voluntary social work setting. Eight units required. Continuation and intensification of experiences in application of social work objectives, principles and skills in service to individuals, families, groups and communities. (Formerly numbered Social Work 750A.)

SWORK 755. Advanced Field Practicum: Social Work Administration and Community Development (4) Cr/NC/RP
Prerequisites: Social Work 650 and concurrent registration in Social Work 720 or Social Work 740 and 745.
Advanced field instruction in public or voluntary social work setting. Eight units required. Continuation and intensification of experiences in application of social work objectives, principles and skills in service to individuals, families, groups and communities. (Formerly numbered Social Work 750B.)

SWORK 758. Seminar in Social Work and Selected Fields of Practice (1-3)
Prerequisites: Social Work 720 or Social Work 740 and 745.
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 needy, 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.
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

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 (Graduate Adviser)
Jill Esbenshade, Ph.D., Associate Professor of Sociology
Henry E. Johnston, Ph.D., Associate Professor of Sociology
Enrico A. Marcelli, Ph.D., Associate Professor of Sociology
Michael A. McCall, Ph.D., Associate Professor of Sociology
Paul W. Sargent, Ph.D., Associate Professor of Sociology
Kyra R. Greene, Ph.D., Assistant Professor of Sociology
Michael J. Roberts, Ph.D., Assistant Professor of Sociology

Associateships and Assistantships
Graduate teaching associateships and graduate assistantships in sociology are available to a limited number of qualified sociology students. Application blanks and further information may be obtained from the department office.

General Information
The Department of Sociology offers graduate work leading to the Master of Arts degree in Sociology. Research facilities provided by the Department of Sociology include a well-equipped Social Science Research Laboratory for use by the faculty and graduate students. Faculty in the Department of Sociology are involved in a wide range of research activities. Regular opportunities exist for participation in these projects by graduate students within the department. The program also prepares students for teaching careers.

Admission to Graduate Study
Students will be admitted for the fall semester. Application packages must be received and complete by the deadline. Deadlines are available on the university Graduate Division Web site.

All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. The graduate advisory committee may consider conditionally classified standing for students whose preparation is deemed insufficient. They will be required to complete specified courses in addition to the minimum of 30 units required for the degree. Applicants should obtain a current information brochure from the department office for detailed information.

Meeting all the indicated criteria does not guarantee admission to the program, since admission is also dependent on the facilities and resources available in the department.

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

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

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

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

(1) One official transcript (in sealed envelopes) from each postsecondary institutions attended;

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

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

Department of Sociology
The following materials should be submitted to:

Department of Sociology
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4423

(1) Three letters of recommendation (at least two must be from persons who can speak to academic ability);
(2) A personal statement;
(3) A writing sample (preferably an academic paper). If this is not available, send an extended, three to five page personal statement;
(4) Copy of transcript;
(5) See application information on the Department of Sociology home page at http://www.rohan.sdsu.edu/dept/sdsusoci/sociology.html.

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy as described in Part Four of this bulletin. Students must have taken the first three courses of the core course series (Sociology 600, 601, 607). Students must have a 3.0 in their program courses and no less than a B– grade in each core course.
Specific Requirements for the Master of Arts Degree

(Major Code: 22081) (SIMS Code: 116901)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree, as described in Part Four of this bulletin, students must complete 30 units in the master’s program. Students must complete the program of study courses with a grade point average of 3.0 or better. The 30 units to include the following courses:

1. Five core courses: Sociology 600, 601, 605, 607, 608.
2. Two 700-level seminars in the Department of Sociology.
3. Two electives: 500 to 700-level courses in the Department of Sociology or another department with approval of the graduate adviser.
4. Sociology 799A for Plan A (Thesis) OR if completing Plan B (Comprehensive Examination) an additional 700-level sociology seminar or Sociology 710 or 796 is required. Students who are interested in applied sociology (SIMS Code: 116903) are encouraged to take Sociology 796 (Field Practicum). Before the student proceeds with the thesis (Sociology 799A), approval from the thesis chair and second committee member must be obtained based on a detailed proposal. The proposal may be developed through enrollment in Sociology 797 (which cannot count as a seminar but may be used to fulfill the elective units). Once the thesis is complete, an oral defense is required to complete the program.

Courses Acceptable on Master’s Degree Program in Sociology (SOC)

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

UPPER DIVISION COURSES

SOC 522. The Family in Comparative and Cross-Cultural Perspectives (3)
Prerequisite: Sociology 101. Recommended: Sociology 421.
Comparative study of selected family systems in the past and present. Comparative analysis of major social and demographic changes in marriage and family in post-industrial nations and less developed countries. Cross-cultural comparisons of family arrangements in contemporary America by social classes and racial-ethnic groups.

SOC 537. Political Sociology (3)
Prerequisite: Sociology 101.
Social organization of political processes. Power and authority, social class, primary groups, collective behavior, social change, and other sociological factors considered in their relationships to political processes.

SOC 539. Sociology of Education (3)
Prerequisite: Sociology 101.
Social organization of education in the United States and other societies. Structure and functions of educational institutions. Formal and informal education. Class, ethnic, and other social factors affecting the educational process. Implications of educational decision making and testing.

SOC 543. Police, Courts, and Corrections: The Sociology of Crime and Punishment (3)
Prerequisite: Sociology 101.

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 330.

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 Sociology 201.
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 696 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
(Graduate Adviser)
Liana Ewald, Ph.D., Assistant Professor of Spanish
Inigo A. Yanguas, Ph.D., Assistant Professor of Spanish

Associateships
Graduate teaching associateships in Spanish are available to a limited number of qualified students. New teaching associates are required to enroll in Spanish 770 during their first semester as teaching associates. Application blanks and additional information may be secured from the chair of the department.

General Information
The Department of Spanish and Portuguese Languages and Literatures offers graduate study leading to the Master of Arts degree in Spanish. The program prepares students for a professional career in teaching.

Library facilities include rich resources in Spanish literature and linguistics, including books, periodicals and newspapers. A Language Acquisition Resource Center with modern equipment is available to both graduate and undergraduate students.

Admission to Graduate Study
All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. An undergraduate major in Spanish is preferable. Applicants from other disciplines may be accepted at the discretion of the graduate admissions committee.

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

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

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

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

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

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

Department of Spanish and Portuguese Languages and Literatures
The following materials should be mailed or delivered to:
Department of Spanish and Portuguese Languages and Literatures
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7703

(1) Three letters of recommendation from professors who are familiar with your abilities as a student;

(2) Statement of purpose in Spanish;

(3) Writing sample (preferably a research paper or essay written in Spanish that was submitted in an undergraduate course from 6 to 10 pages).

Advancement to Candidacy
In addition to meeting the requirements for advancement to candidacy as described in Part Four of this bulletin, students may be required to pass a qualifying examination in Spanish given by the Department of Spanish and Portuguese Languages and Literatures.

Specific Requirements for the Master of Arts Degree
(Major Code: 11051) (SIMS Code: 117101)
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the student must complete an approved graduate program of at least 30 units to include Spanish 601, 602, 661, 770; Spanish 603 or 604; Spanish 605 or 606; and 12 units of electives selected in consultation with the graduate adviser.

Students may elect either Plan A, Thesis; or Plan B, Comprehensive Examination to meet the culminating experience requirement for the Master of Arts degree in Spanish.

All candidates must demonstrate knowledge of Portuguese by passing an examination administered by the department or by completing Portuguese 101 or 201.
Courses Acceptable on Master's Degree Programs in Spanish (SPAN) (PORT)

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

Spanish (SPAN)
UPPER DIVISION COURSES

NOTE: All upper division courses in Spanish are taught in Spanish unless otherwise stated.

SPAN 501. Genre Studies in Spanish Literature (3)
Prerequisites: Spanish 405A-405B.
A specific literary genre: overview of the genre’s development in Spanish literature (Spanish novel, short story, theatre) or focus on a narrower period (contemporary narrative, modern poetry). May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

SPAN 502. Genre Studies in Spanish American Literature (3)
Prerequisites: Spanish 406A-406B.
A specific literary genre: overview of the genre’s development in Spanish American literature (the Spanish American novel, short story, theatre) or focus on a narrower period (vanguardista poetry, the “Boom”). May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

SPAN 503. Literature of Baja California (3)
Prerequisites: Spanish 406A-406B.
Diachronic overview of Baja California literature in its different genres. Cultural phenomenon of the border nation, in which the Californias are vital.

SPAN 504. Don Quixote (3)
Prerequisite: Spanish 405A.
A close reading of Cervantes’ novel Don Quixote, Parts I and II.

SPAN 515. Mexican Literature (3)
Prerequisites: Spanish 406A-406B.
Mexican literature from the Romantic period to the present. Special emphasis placed on contemporary era.

SPAN 520. Caribbean Area Countries Literature (3)
Prerequisites: Spanish 406A-406B.
Literature of Caribbean Islands, Central America, Colombia and Venezuela, from colonial period to present. Special emphasis on contemporary era.

SPAN 549. Spanish Phonetics and Phonology (3)
Prerequisite: Spanish 448.

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.
Critical evaluation of consecutive interpretation techniques focusing on current events and simultaneous interpretation techniques focusing on current events. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 594A, 594B, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

SPAN 601. Seminar in Hispanic Literary Theory (3)
Prerequisite: Graduate standing.
Critical issues in Hispanic literary theory. Emphasis on contemporary theory: structuralism, post-structuralism, feminism, cultural studies, and gay and lesbian studies.

SPAN 602. Foundations and Research Methods of Hispanic Linguistics (3)
Prerequisite: Graduate standing.
Morphology, phonology, syntax of Spanish in historic and regional varieties. Qualitative and quantitative research related to sociolinguistics and pragmatics of Spanish; language acquisition, bilingualism, contact varieties. Spanish in teaching and translation.

SPAN 603. Spanish Literature: Ninth to Seventeenth Century (3)
Prerequisite: Spanish 601.
Philosophical, political, and aesthetic ideas in Spanish literature spanning ninth through seventeenth centuries. Medieval, Renaissance, and Baroque periods. Writers include Luis de Gongora, Calderon de la Barca, and Lope de Vega.

SPAN 604. Spanish Literature: Eighteenth to Twentieth Century (3)
Prerequisite: Spanish 601.
Philosophical, political, and aesthetic ideas in literature of neoclassicism, romanticism, realism, and modernism from eighteenth through twentieth centuries. Writers include Jose Cadalso, Emilia Pardo Bazan, Federico Garcia Lorca, Antonio Buero Vallejo, and Lidia Falcon.

SPAN 605. Latin American Literature: 1492 to 1880 (3)
Prerequisite: Spanish 601.

SPAN 606. Latin American Literature: 1880 to Present (3)
Prerequisite: Spanish 601.
Development of Latin American literature in its artistic and ideological tendencies from 1880 to present. Literary movements include romanticism, realism, modernism, criollismo, indigenism, feminism/post-feminism, neomarxism, and postmodernism. Focus on short stories and drama.
SPAN 611. Advanced Topics in Spanish Linguistics (3-6)
Prerequisite: Spanish 602.
Specific aspect of Spanish descriptive, historical, or theoretical linguistics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

SPAN 612. Seminar in Spanish Discourse Analysis (3)
Prerequisite: Spanish 602.
Analysis of oral discourse in Spanish. Basic readings in field and strategies to collect and analyze data.

SPAN 630. Golden Age Drama (3)
Prerequisite: Spanish 601.
The works of Lope de Vega and Calderón among others.

SPAN 631. Spanish Women Writers (3)
Prerequisite: Spanish 601.
Feminist and cultural studies approach to works of Spanish women writers. Analysis of issues on gender, class, race. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

SPAN 632. Seminar in Guilt and Innocence in Nineteenth and Twentieth Century Narrative (3)
Prerequisite: Spanish 601.
Evolution of detective novel from nineteenth through twentieth century. Socio-historic context and thematic concepts; truth and fiction, crime and punishment, construction of identities (criminal, delinquent, detective, victim). Maximum credit six units applicable to a master’s degree.

SPAN 661. Issues in the Study of Spanish Bilingualism (3)
Prerequisite: Spanish 602.

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 the language laboratory.

SPAN 781. Spanish Language Testing (3)
Prerequisite: Spanish 602.
Theories and research on language testing with emphasis on Spanish. Types and purposes of language measurement instruments. Characteristics of tests: practicality, instructional value, validity, reliability, test difficulty. Overview of test formats/methods and their consequences.

SPAN 792. Spanish Language and Society (3)
Prerequisite: Spanish 602.

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

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

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

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

Portuguese (PORT)

UPPER DIVISION COURSE

NOTE: All upper division courses in Portuguese are taught in Portuguese unless otherwise stated.

PORT 535. Brazilian Literature (3)
Prerequisite: Portuguese 401.
Important movements, authors, and works of the literature of Brazil from the colonial period to modern times.
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. Wulfeck, Ph.D., Professor of Speech, Language, and Hearing Sciences, Director of School
- Jessica A. Barlow, Ph.D., Professor of Speech, Language, and Hearing Sciences (Graduate Adviser)
- Karen D. Emmorey, Ph.D., Professor of Speech, Language, and Hearing Sciences
- Vera F. Gutierrez-Cielen, Ph.D., Professor of Speech, Language, and Hearing Sciences
- Steven J. Kramer, Ph.D., Professor of Speech, Language, and Hearing Sciences
- Carol L. Mackersie, Ph.D., Professor of Speech, Language, and Hearing Sciences
- Marilyn Newhoff, Ph.D., Professor of Speech, Language, and Hearing Sciences and Dean of the College of Health and Human Services
- Lewis P. Shapiro, Ph.D., Professor of Speech, Language, and Hearing Sciences
- Laura Dreisbach Hawe, Ph.D., Associate Professor of Speech, Language, and Hearing Sciences
- Julia L. Evans, Ph.D., Associate Professor of Speech, Language, and Hearing Sciences
- Tracy E. Love-Geffen, Ph.D., Associate Professor of Speech, Language, and Hearing Sciences
- Peter Torre, III, Ph.D., Associate Professor of Speech, Language, and Hearing Sciences
- Henrike K. Blumenfeld, Ph.D., Assistant Professor of Speech, Language, and Hearing Sciences
- Ignatius Nip, Ph.D., Assistant Professor of Speech, Language, and Hearing Sciences
- Sonja Pruitt-Lord, Ph.D., Assistant Professor of Speech, Language, and Hearing Sciences

**General Information**

The master’s degree program in speech pathology and professional doctorate in audiology (AuD) are accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology. The School of Speech, Language, and Hearing Sciences offers graduate study leading to the Master of Arts degree in speech, language, and hearing sciences, and to the credentials described below. The cooperating faculties of San Diego State University and the University of California, San Diego, offer a joint program leading to a Ph.D. in language and communicative disorders and a professional doctorate in audiology (AuD). The School of Speech, Language, and Hearing Sciences is committed to preparing speech-language-hearing professionals to meet the challenges of a culturally and linguistically diverse society. An M.A. degree in speech, language, and hearing sciences provides the necessary education, technical training, and creative experience necessary for professional activity, college-level teaching, and preceptors in speech-language pathology and related fields.

The programs utilize the facilities of the Speech, Language, and Hearing building, which includes observation rooms, school reference collection, and speech and hearing science laboratories. In the laboratories, students use personal computers, microprocessor-based diagnostic audiometers, spectral signal analyzer, acoustic immittance equipment, hearing aid analyzer, digital spectrograph, Visipitch, phonemic mirror, state-of-the-art ENG and evoked potential equipment, miniphoneators, audiometric response simulators, laryngoscopic manikin, and audio and video recording equipment with ongoing new acquisitions.

In addition, the school utilizes its on-campus audiology and speech-language clinics. Students and faculty participate in providing direct delivery of clinical services to clients and participate in the assistive device assessment program, which evaluates and recommends augmentative or alternative means of communication for persons with severe communication impairment. Field experience is offered in the public schools and community agencies. Practicum and observation experiences are possible at various hospitals, schools, community agencies, convalescent homes, and rehabilitation agencies.

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

**Admission to Graduate Study**

Students will be admitted to the graduate programs only in the fall semester. Applications to the university must be submitted by January 20 for the master's degree programs in speech-language pathology, education of the deaf, and communicative sciences. For application information, see the school’s Web site, http://chhs.sdsu.edu/slhs/, select “M.A. Application” from the index or call 619-594-7746. All students must satisfy the general admission and examination requirements for admission to the university with classified graduate standing as described in Part Two of this bulletin. In addition, the applicant must satisfy the following requirements before being considered for admission to classified graduate standing by the school’s Admissions Review Committee.

Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the application fee. All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Speech, Language, and Hearing Sciences. Incomplete applications will not be reviewed.

**Deadline for receipt: January 20**

**Graduate Admissions**

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

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

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

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

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

The following materials must be mailed or delivered and received by January 20:

School of Speech, Language, and Hearing Sciences (Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1518

(1) Submit the School of Speech, Language, and Hearing Sciences application available at http://chhs.sdsu.edu/slhs/;
(2) Print a copy of the completed SLHS application and include with admission packet;
(3) One applicant essay (guidelines available on school Web site);
(4) Three recommendation forms in sealed and signed envelopes (forms available on school Web site);
(5) Resume of experiences applicable to this field (optional).

Once the above requirements have been satisfied, the applicant’s file is considered complete and eligible for review by the school’s Admissions Review Committee. Admission to the graduate programs is guided by careful consideration of all the above materials by a designated Admissions Review Committee. Applicants whose files are incomplete will not be eligible for admission to classified graduate standing. The number of new admissions is restricted and is determined by space availability; therefore, admission is based on consideration of all application materials and the relative merits of individual applicants among all eligible applicants.

Graduate faculty serve as graduate advisers and are assigned to students upon admission.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin.

Specific Requirements for the Master of Arts Degree

(Major Code: 12201)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the student must complete a graduate program of at least 36 units (45 units for the Concentration in Speech-Language Pathology). A student must complete Speech, Language, and Hearing Sciences 799A, Thesis for Plan A. The thesis option requires approval by the school and may not be appropriate for every student. If Plan B is elected, the student must pass a written comprehensive examination (which may be repeated only twice). No more than six units of coursework outside the school acceptable on the graduate level may be applied to the master’s degree.

The School of Speech, Language, and Hearing Sciences offers two concentrations leading to the Master of Arts degree. Each concentration requires completion of a specific pattern of graduate units described below:

A. Concentration in Speech-Language Pathology (SIMS Code: 550182), This concentration has a clinical focus and may be used to satisfy some of the academic preparation for the Certificate of Clinical Competence in Speech-Language Pathology from the American Speech-Language Hearing Association and for licensure from the State of California. Students are required to complete coursework in all of the following areas:
   a. Voice Disorders
   b. Fluency Disorders
   c. Articulation/Phonology Disorders
   d. Adult Language Disorders
   e. Child Language Disorders
   The coursework may be taken during undergraduate or graduate preparation.

Undergraduate Preparation. Speech, Language, and Hearing Sciences 101, 106, 300, 305, 320, 321, 340, 340L, 511, 512, 513, 514, 580; Psychology 260; Psychology 270 or Sociology 201 (or equivalent coursework in these areas).

Graduate Program. Students must complete a minimum of 44 units. The following core courses are required: Speech, Language, and Hearing Sciences 570, 600, 606, 607, 608, 609A, 609B, 613, 614, 617, 675, and either 672 or 673. In addition, students must complete nine units from Speech, Language, and Hearing Sciences 707, 750, 754, 790, 793, 794, 795, 797, 798, 799A. At least three of the nine units must be selected from Speech, Language, and Hearing Sciences 707, 750, 754, 790, 793, 794.

Students electing to pursue the Certificate of Clinical Competence in Speech-Language Pathology (ASHA), California licensure for Speech-Language Pathology, or the Clinical-Rehabilitative Services Credential (Language, Speech and Hearing or Special Day Class) for California Schools should complete, in addition to the required courses listed above, additional courses and clinical hours required by national and state organizations. It is school policy that all credential students maintain a 3.0 grade point average in all 600 level and above credential courses.

Specialization in Bilingualism

Students who speak languages for which clinical training is not available (i.e., languages other than Spanish) and who have an interest in bilingualism are encouraged to apply to the concentration in speech-language pathology with a specialization in bilingualism. Students are required to pass a language proficiency test in a language other than English. To be a candidate for the specialization, a student must be admitted to the master’s degree program in speech-language pathology since the specialization is coordinated with these endeavors.

The following core courses are required: Speech, Language, and Hearing Sciences 570, 600, 605, 606, 607, 608, 609A, 609B, 613, 614, 617, 672 or 673, 675, 794. Students must also complete three units of Speech, Language, and Hearing Sciences 750, 795, or 798 with approval of the school adviser.

B. Concentration in Communicative Sciences (SIMS Code: 550142), This concentration has research and theoretical foci in the area of communicative disorders. Students interested in study with a research environment requiring a strong scientific foundation may avail themselves of this concentration.

Undergraduate Preparation. Speech, Language, and Hearing Sciences 101, 106, 300, 305, 320, 321, 340, 340L, 512, 513, 580; Psychology 260; Psychology 270 or Sociology 201 (or equivalent coursework in these areas).

Graduate Program. Required courses: 36 units to include Speech, Language, and Hearing Sciences 600; 33 units of electives from 600 and 700-level courses with consent of the faculty adviser that can include up to six units of 500, 600, and 700-numbered courses from engineering, linguistics, physics, psychology, or other departments. Students may complete three units of 799A (Plan A) as part of the 33 units or pass a comprehensive examination (Plan B).

Section II.

General Information

(Major Code: 12201) (SIMS Code: 550102)

The cooperating faculties of San Diego State University and the University of California, San Diego, offer a joint doctoral program in language and communicative disorders. The program’s focus is the interdisciplinary study of language and communicative disorders. A major emphasis of the program is to apply techniques developed in
cognitive science and neuroscience to the study of language and language disorders. The program involves study and research in normal and abnormal language (including sign languages), and in the neural bases of language use and language loss.

Participating faculty have research interests in a wide range of issues in the processes of language development, language and aging, multilingualism, language disorders, assessment, and intervention. Graduates of the program will be qualified to serve as faculty in university programs in a variety of disciplines, and to provide leadership in research and health services.

The doctoral program faculty at SDSU are members of the School of Speech, Language, and Hearing Sciences, Department of Linguistics and Asian/Middle Eastern Languages, and the Department of Psychology. The doctoral program faculty at UCSD are also an interdisciplinary group from the Department of Cognitive Science, Department of Communications, Department of Linguistics, Department of Neurosciences, and the Department of Psychology. The program is coordinated by the doctoral program directors at each campus, in conjunction with an executive committee comprised of three faculty from each campus appointed by the graduate deans from each campus.

The program is innovative in that many of the requirements are designed to function as a model of professional preparation specifically incorporating activities in which a successful teacher and researcher must engage after obtaining the Ph.D. Students will be required to participate in interdisciplinary research throughout the program, learn about the nature and ethics of research, prepare grant proposals, write manuscripts, and will gain experience in oral presentations and teaching. Graduates from the program will be well-prepared for the rigors of an academic/research career.

Faculty

The following faculty participate in the doctoral program in language and communicative disorders and are available as advisers, for direction of research, and as members of dissertation committees.

San Diego State University: Barlow (Speech, Language, and Hearing Sciences), Cheng (Speech, Language, and Hearing Sciences), Choi (Linguistics and Asian/Middle Eastern Languages), Emmorey (Speech, Language, and Hearing Sciences), Fenson (Psychology), Friend (Psychology), Gutierrez-Clellen (Speech, Language, and Hearing Sciences), Love-Geffen (Speech, Language, and Hearing Sciences), Mueller (Psychology), Newhoff (Speech, Language, and Hearing Sciences), Pruitt (Speech, Language, and Hearing Sciences), Reilly (Psychology), Shapiro (Speech, Language, and Hearing Sciences), Wulfeck (Speech, Language, and Hearing Sciences).

University of California, San Diego: Ackerman (Linguistics), Bellugi (Salk Institute, Psychology), Carver (Psychology), Coulson (Cognitive Science), Deák (Cognitive Science), Elman (Cognitive Science), Ferreira (Psychology), Halgren (Neurosciences), Klichovsky (Neurosciences), Kubas (Cognitive Science), Mayberry (Linguistics), Moore (Linguistics), Padden (Communications), Rayner (Psychology), Townsend (Neuroscience), Trauner (Neuroscience).

Admission to Doctoral Study

The doctoral program in language and communicative disorders draws from a variety of disciplines including speech, language, and hearing sciences, psychology, cognitive science, linguistics, engineering, and other related sciences. Students should have adequate preparation in mathematics, statistics, and biological sciences. Backgrounds in neurosciences and/or language sciences, or language disorders is helpful, but not required for admission.

Applicants for admission to the doctoral program must meet the general requirements for admission to both universities, as specified in the current SDSU and UCSD catalogs. Applicants must meet the special requirements of this program which include (a) an acceptable baccalaureate or master’s degree or equivalent from a regionally accredited institution; (b) a GPA of at least 3.25 on a 4.0 scale in the last 60 semester (or 90 quarter) credits of upper division and/or graduate courses (c) good standing in the last institution attended; (d) suitable scores on both the quantitative and verbal sections of the Graduate Record Examination; (e) submission of appropriate application form and supporting materials as outlined below.

Applicant files are reviewed as a group by an admissions committee, composed of doctoral program faculty from each campus. Other doctoral faculty may review applicant files and make recommendations to the admissions committee. Assuming that the above requirements are met, decisions will also be guided by an evaluation of the adequacy of the applicant’s preparation in view of their stated needs and objectives. Given the limited number of spaces available (4 to 6 new admissions each year are anticipated, subject to available facilities), the admissions committee will select the best qualified applicants to fill the available spaces. No minimum set of qualifications will guarantee an applicant admission to the doctoral program. The admissions committee will make recommendations for admission to the graduate deans from each campus.

Application. Students will be admitted to the doctoral program only in the fall semester/quarter. Applications and all other supporting materials must be received (not postmark) by January 20 to be considered for the doctoral program beginning in the following fall semester/quarter.

Application Guidelines for the SDSU/UCSD Joint Doctoral Program in Language and Communicative Disorders

To be admitted to the Joint Doctoral Program, applicants must electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the SDSU/UCSD Joint Doctoral Program.

Graduate Admissions

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

Graduate Admissions

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

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

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

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

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

SDSU/UCSD Joint Doctoral Program

The following materials should be submitted in a single envelope by January 20 to:

SDSU/UCSD Joint Doctoral Program in Language and Communicative Disorders
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1518

(1) Departmental application form (http://chhs.sdsu.edu/slhs/);

(2) Statement of purpose;

(3) Three letters of recommendation (http://chhs.sdsu.edu/slhs/) in individually sealed envelopes;

(4) Publication reprints or presentation abstracts, if available.
Specific Requirements for the Doctor of Philosophy Degree

Faculty Adviser. Upon admission to the program, the executive committee will assign each student a faculty adviser. The faculty adviser will help the student select a program of study during the first year. The faculty adviser, in conjunction with the doctoral program coordinators, will help the student select a first laboratory rotation. Once the student has selected a major area of study (see below) the student will be reassigned an appropriate adviser.

Residency Requirements. Students will be required to complete credits equivalent to one year’s full-time enrollment at each campus. The definition of residence must be in accord with the regulations of SDSU and UCSD. Students may be enrolled in courses at both institutions during any given semester/quarter.

Language Requirement. Students are required to have some experience in the acquisition of a second language. This may be satisfied through informal learning, immersion, or two or more years of formal coursework in a second language. Any recognized natural language will be acceptable to fulfill this requirement (including American Sign Language or other sign languages). Artificial languages, e.g., computer languages, will not satisfy this requirement. For students selecting the multilingualism concentration, proficiency must be demonstrated in English and at least one other language.

Major Area of Concentration. By the end of the first year, all students select a major field of emphasis by choosing one of three concentrations: Adult Language, Child Language, or Multilingualism. All students will be required to take some courses in each of the three concentrations.

The Adult Language concentration is intended to provide intensive education in communicative disorders in adults. Students in this concentration will also develop expertise in the study of language processing in normal adults.

The Child Language concentration is intended to provide specialized education in childhood (birth to adolescence) communicative disorders. Students in this concentration will also achieve competence in developmental psycholinguistics emphasizing language acquisition in normally-developing children.

The Multilingualism concentration is intended to provide education in cross-linguistic, ethnographic, and other comparative studies of communicative disorders in children and/or adults, including those associated with bilingualism and second language acquisition (including acquisition of sign language in deaf individuals).

Course Requirements. The program for each student will consist of a common core of courses designed to provide the basic tools for research and a foundation knowledge in the important issues in language and communicative disorders, together with specific electives appropriate to the student’s chosen concentration.

The Tools requirement consists of two courses in statistics/research design, a course in neuroanatomy and physiology, a course in language structure and theory, and a professional survival skills course.

The Foundations requirement consists of three courses on normal language and three courses on disorders of language.

The Electives requirement consists of at least five courses, with a minimum of three courses related to the chosen concentration. These electives must be chosen from a broad list of approved options from anthropology, cognitive science, communicative disorders, computer science, linguistics, neurosciences, and psychology. Consult with adviser for approved elective courses. Other electives may be taken to satisfy this requirement with permission of the adviser. The five required electives must be approved by the student’s adviser and the doctoral program coordinators. Students may select additional electives with approval of the adviser.

Laboratory Rotations. In order to obtain experience in different research methodologies, each student will be required to complete three laboratory rotations, each lasting a minimum of one semester or quarter. During each rotation, students will enroll in the associated laboratory course. The laboratory rotations must be approved by the student’s adviser and the doctoral program faculty member who supervised that laboratory.

Projects. All students will be required to complete two research projects during their first two years of the program (first and second year projects). These projects are usually connected with the laboratory rotations and approved by the doctoral program faculty working in the laboratory. These projects will involve experiment design, data collection, analyses, preparation of a potentially publishable manuscript, and an oral presentation of the research findings at one of the laboratory seminars. Students will be encouraged to submit their projects for presentation at professional meetings and to submit them to an appropriate journal.

Methods Minor. All students will be required to develop basic expertise in experimental design and statistics, and all students will become familiar with standard techniques for behavioral assessment, e.g., intelligence testing, standardized tests of language ability, analyses of free speech, design and implementation of experimental measures of language and other related cognitive behaviors. In addition, by the end of the third year, all students will declare a methods minor from one of three options: behavioral dynamics, neural imaging, or neural modeling. It is expected that the student will gain experience in the chosen minor through at least one laboratory rotation and enrollment in applicable courses selected with adviser recommendation.

The Behavioral Dynamics minor is intended for students who want to specialize in computer-controlled methods for the study of language and cognitive processing in real-time.

The Neural Imaging minor is intended for students who want to complement behavioral studies with neuro-anatomical and neuro-physiological techniques, including event-related brain potentials and functional magnetic resonance imaging.

The Neural Modeling minor is intended for students who are interested in the simulation of normal and abnormal language and cognition in artificial neural networks. Students who elect this minor will be required to take Cognitive Science 210F or Computer Science 258A as an elective.

Qualifying Examination. After successful completion of the first and second year projects, the student is eligible to take the qualifying examination. The qualifying examination consists of a written component which is to be in the form of a scholarly review of one or more issues related to the student’s chosen area of research and an oral component which will be a formal presentation of the paper to be presented at the annual fall doctoral colloquium or at a separate colloquium. Students will be encouraged to write their integrative paper in a form and quality which may be submitted to an appropriate journal.

Teaching. The teaching requirement may be satisfied under one of two options. Model 1 requires that the doctoral student teach a full course and submit the course syllabus to the Executive Committee for review at the end of the semester/quarter. Model 2 requires that the doctoral student serve as a T.A. (SDSU) and/or T.A. (UCSD) for two courses. The student will develop a syllabus in an area related to one of these courses and present a master lecture to the Executive Committee and an invited audience on a topic in the syllabus chosen by the Executive Committee.

Dissertation Committee. Prior to developing a dissertation proposal, the student must have a dissertation committee. The committee members are recommended by the doctoral program coordinators with consent of the executive committee, and then appointed by the graduate deans of both campuses. The dissertation committee will consist of at least five members, including four from the doctoral program faculty groups (with at least two members from each campus) and one faculty member from outside the doctoral program faculty groups.

Dissertation Proposal. The dissertation proposal will take the form of an NIH or NSF grant proposal. For model 1 dissertation (see below), the proposal will be based on completed research which become pilot studies for the grant proposal. The student may be encouraged to submit the grant proposal to support their future research, e.g., post doctoral studies, or a First Investigator Award. For model 2 dissertation, the proposal will become the basis for the dissertation research to be completed. The dissertation proposal must be approved by the student’s dissertation committee.
Advancement of Candidacy. A student will be recommended for advancement to candidacy after completing all requirements as described above, including the qualifying examination and the dissertation proposal. Students eligible for advancement to candidacy are recommended to the graduate deans of both institutions. When approved by both institutions, students will be notified by the Graduate Studies office at UCSD.

Dissertation. After advancement to candidacy, the remaining requirement will be the satisfactory completion of a dissertation. The dissertation may take one of the following two forms: 

Model 1 dissertation. Students who have maintained continuity through their second year project, qualifying examination, and dissertation proposal, and who have successfully generated publishable research which has been submitted to respected journals, may use a minimum of three such interconnected manuscripts as their dissertation. The dissertation will contain an introduction and review of the literature which conceptually links the submitted studies, the studies themselves (exactly as they have been prepared for publication), and a conclusion which pulls the results together in a broader theoretical framework.

Model 2 dissertation. Students may choose to carry out a more traditional dissertation involving the appropriate written presentation of original research carried out by the student under the guidance of the student's dissertation committee chair.

Dissertation Defense. The dissertation defense will be the same for both dissertation models and will consist of an oral presentation of the dissertation material to the doctoral committee and a publicly invited audience.

Award of the Degree. The Doctor of Philosophy degree in language and communicative disorders will be awarded jointly by the Regents of the University of California and the Trustees of The California State University in the names of both institutions.

Financial Support. Funding for graduate students cannot be guaranteed, although every effort will be made to provide students with some form of support through faculty grants, graduate teaching associateships, research assistantships, or scholarships. The program endeavors to provide financial support that will enable all students to devote full time to study and research training. Financial support will be awarded consistent with the policies of the Divisions of Graduate Affairs at each campus. Tuition and fees will be determined in accord with extant policies at the campus in which the student is matriculated in a given year.

Credential

The School of Speech, Language, and Hearing Sciences offers academic and practica coursework applicable to the Speech Language Pathology (SLP) Credential (Credential Code: 00900), required for working in California public schools.

Applicants to a credential program are required to submit scores from the California Basic Education Skills Test (CBEST) as part of the application for admission to a credential program. Note that the CBEST is given only three or four times each year.

Credential candidates are required to have the Certificate of Clearance (finger printing) prior to beginning the school experience. Candidates should apply for the Certificate of Clearance several months prior to submitting an application to the department for school practicum placement in order for the certificate to be processed in time for the placement.

Speech Language Pathology Credential:

Language, Speech and Hearing

(Credential Code: 00900)

Students desiring to work with pupils with speech-language and hearing impairments on an itinerant or pull-out basis must complete the Speech Language Pathology (SLP) Credential in 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 certificate is desired.
Preparation Leading to State Licensure in Speech Pathology or Audiology

Students may complete the academic and clinical practicum requirements leading to California State Licensure in Speech Pathology or in Audiology, a legal requirement for all individuals professionally employed in non-public school settings and some public school settings. The Speech Pathology and Audiology Examining Committee which operates within the California State Board of Medical Quality Assurance requires a master’s degree or equivalent in speech, language, and hearing sciences in the area (Speech Pathology or Audiology) in which the license is to be granted. 300 clock hours of supervised clinical experience, a national examination, and nine months of full-time supervised work experience (Required Professional Experience). Most Licensure and ASHA Certification requirements may be fulfilled concurrently. Consult an adviser in the area in which licensure is desired for specific information.

Bilingual Speech-Language Pathology Certificate

The Certificate in Bilingual Speech-Language Pathology is designed for students who plan to work with bilingual speakers with communicative disorders. To be a candidate for the certificate, a student must be seeking the master’s degree program in speech-language pathology since the certificate is coordinated with these endeavors.

The certificate program requires completion of 13 units to include nine units of substantive coursework and four units of graduate clinical practicum with bilingual speakers with communicative disorders. Based on research and clinical expertise of the faculty, as well as the availability of a clinical population, the certificate is currently focused on Spanish-English communicative disorders. The following core courses are required: Speech, Language, and Hearing Sciences 672, 673, 794. In addition, students must complete 100 hours of graduate clinical practicum in the target language(s). Candidates seeking admission to the certificate program must pass a Spanish proficiency test and satisfy admission requirements to the school as listed in the Graduate Bulletin. Students who speak languages for which clinical training is not available (i.e., languages other than Spanish) are encouraged to apply to the specialization in bilingualism within the concentration in speech-language pathology.

Courses Acceptable on Master's and Doctoral Degree Programs in Speech, Language, and Hearing Sciences (SLHS)

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

UPPER DIVISION COURSES

SLHS 503. Advanced Speech Physiology (3)

Prerequisites: Speech, Language, and Hearing Sciences 320 and 321.

Methodology used to evaluate speech physiology in normal and disordered populations. Discussion of characteristics and etiologies of various speech disorders.

SLHS 511. Pediatric Aural Rehabilitation (3)


Theoretical, methodological, and technical issues related to facilitating receptive and expressive communication in children who are deaf or hard-of-hearing. Emphasizes multidisciplinary case management of children.

SLHS 512. Phonological Acquisition and Disorders (3)

Prerequisite: Speech, Language, and Hearing Sciences 320. Phonology, phonological development, and phonological disorders as they relate to basic linguistic theory. Concepts considered through critical thinking and problem-solving.

SLHS 513. Language Development and Disorders in Early Childhood (3)

Prerequisites: Speech, Language, and Hearing Sciences 300, 320, 321.

Language and communication development, delay, and disorders as they relate to theory and clinical practice in children from infancy through preschool age.

SLHS 514. Language Development and Disorders in School Age Children and Adolescents (3)

Prerequisites: Speech, Language, and Hearing Sciences 300, 320, 321.

Language development, delay, and disorders as they relate to developmental theory and clinical practice for school-age children from 5 through 18 years of age.

SLHS 521. Speech-Language Screening of Children (1) Cr/NC

Four hours of supervision. Prerequisite: Clinic clearance.

Screening speech and language of children in various community facilities and settings.

SLHS 522. Speech-Language Screening of Adults (1)

Four hours of supervision. Prerequisite: Clinic clearance.

Screening speech and language of adults in various community facilities and settings.

SLHS 525. Clinical Processes (1-2)

Prerequisite: Consent of instructor.

Clinical issues, policies, and methods in speech-language pathology. Experience in writing lesson plans and clinical reports. Clinical observation to partially fulfill requirements for certification. Maximum credit five units.

SLHS 541. Hearing Screening of Children (1) Cr/NC

Three hours of laboratory screening per week. Prerequisites: Speech, Language, and Hearing Sciences 340 and 340L.

Field experiences in audiometric and impedance screening of children to obtain contact hours in screening required by American Speech-Language-Hearing Association, California License, and Clinical-Rehabilitative Services credential.

SLHS 546. Clinical Practice with Aural Rehabilitation (0.5)

Two hours of supervision. Prerequisites: Grade of C or better in Speech, Language, and Hearing Sciences 511 and a minimum of two units in Speech, Language, and Hearing Sciences 525.

Supervised practicum in aural rehabilitation. One unit represents two hours of clinical contact and one hour of staffing per week.

SLHS 550. Deaf Studies and Education (3)

Prerequisites: Speech, Language, and Hearing Sciences 150; and 201 or competency in American Sign Language.

History and current trends in deaf studies and education; contemporary issues; elementary, secondary and higher education programs for young deaf students; communication and visual technologies; federal laws and legal precedents; activism and leadership in deaf community; diverse career opportunities.

SLHS 558. ASL Structure and Acquisition (3)

Prerequisites: Speech, Language, and Hearing Sciences 150; and 201 or competency in American Sign Language.

ASL phonology, morphology, syntax, and discourse structure, including simple and complex sentence structure, storytelling, and sociolinguistics. Analyzing language samples in ASL. Developing lesson plans to teach ASL to deaf and hard-of-hearing children.

SLHS 570. Dysphagia (3)

Prerequisite: Consent of instructor.

SLHS 580. Communication Processes and Aging (3)
Prerequisite: Twelve upper division units in an appropriate major.
Normal and disordered communication processes in the aging.

SLHS 595. Research Practicum (1-3)
Prerequisites: Consent of instructor and approval of school chair.
Participation in a specific research activity under faculty supervision.
Maximum combined credit of six units of Speech, Language, and Hearing Sciences 595 and 795.

SLHS 596. Selected Topics in Speech, Language, and Hearing Sciences (1-4)
Prerequisite: Twelve units in speech, language, and hearing sciences courses.
Specialized study of selected topics from the area of speech-language pathology, audiology, education of the hearing impaired, and speech and hearing science. May be repeated with new content.
See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

SLHS 600. Research Methods in Communication Sciences and Disorders (3)
Prerequisite: Consent of instructor.
Methods, evaluation, and exposition of research in communication sciences and disorders.

SLHS 606. Voice, Resonance, and Fluency Disorders (3)
Prerequisite: Consent of instructor.
Normal voice, resonance, and fluency. Symptoms and causes of voice, resonance, and fluency disorders and their assessment and management.

SLHS 607. Phonology and Phonological Disorders (3)
Prerequisite: Consent of instructor.
Characterization of phonological disorders, assessment frameworks, intervention strategies. Theoretical frameworks of phonology as applied to and experimentally evaluated in speech-language pathology. Methodology considered within context of clinical cases studies designed to facilitate critical thinking and problem-solving.

SLHS 608. Acquired Neuromotor Speech Disorders (3)
Prerequisite: Consent of instructor.
Theories and clinical methods of diagnosis and intervention pertaining to motor speech disorders (dysarthria and apraxia of speech) in adults.

SLHS 609A. Acquired Neurogenic Language and Cognitive Disorders I (3)
Prerequisite: Consent of instructor.
Theories and clinical methods of diagnosis and intervention pertaining to language and communication disorders in adults with left or right hemisphere brain damage.

SLHS 609B. Acquired Neurogenic Language and Cognitive Disorders II (3)
Prerequisite: Speech, Language, and Hearing Sciences 609A.
Theories and clinical methods of diagnosis and intervention pertaining to cognitive and linguistic disorders in adolescents and adults with traumatic brain injury, dementing illness or frontal lobe impairments.

SLHS 613. Language Disorders: Infancy Through Preschool (3)
Prerequisite: Consent of instructor.
Major theories of language development with focus on early language development; effect of theoretical perspective on approaches to assessment and intervention; development and evaluation of assessment and intervention procedures and instruments.

SLHS 614. Language Disorders: School Age Through Adolescence (3)
Prerequisite: Consent of instructor.
Normal and impaired language development in children five years through adolescence. Assessment and intervention for language disorders across spoken and written modalities.

SLHS 617. Diagnostic Methods in Speech-Language Pathology (3)
Prerequisite: Consent of instructor.
Principles and procedures for culturally relevant assessment of communication disorders in children and adults. Ethnographic interviewing: formal, informal, and unbiased testing; clinical reporting. Practice with selected methods and tools.

SLHS 618A. Diagnostic Practicum in Speech-Language Pathology: Pediatrics (1)
Four hours of supervision.
Prerequisites: Speech, Language, and Hearing Sciences 600, 607, 613, 617, and two units of 525.
Supervised clinical practice in diagnostic methods with pediatric clients. Maximum credit six units.

SLHS 618B. Diagnostic Practicum in Speech-Language Pathology: Adults (1)
Four hours of supervision.
Prerequisites: Speech, Language, and Hearing Sciences 600, 607, 613, 617, and two units of 525.
Supervised clinical practice in diagnostic methods with adult clients. Maximum credit six units.

SLHS 619. Multidisciplinary Diagnostic Practicum in Speech-Language Pathology (1)
Four hours of supervision.
Prerequisite: Consent of instructor.
Participation in multidisciplinary assessment of infants and toddlers.

SLHS 626A. Pediatric Speech-Language Pathology (0.5)
Two hours of supervision.
Prerequisites: Speech, Language, and Hearing Sciences 600, 607, 613, 617, and two units of 525.
Supervised intervention practica with children. Up to two hours per week of client contact plus staffing. Up to three units may be taken concurrently. Maximum credit nine units. (Formerly numbered Speech, Language, and Hearing Sciences 626.)

SLHS 626B. Neurogenic Speech-Language Intervention (0.5)
Two hours of supervision.
Prerequisites: Speech, Language, and Hearing Sciences 600, 607, 613, 617, and two units of 525.
Supervised intervention practica with adults with neurogenic communication disorders. Up to two hours per week of client contact plus staffing. Up to three units may be taken concurrently. Maximum credit nine units.

SLHS 626C. Voice/Fluency/Dysphagia Clinical Intervention (0.5)
Two hours of supervision.
Prerequisites: Speech, Language, and Hearing Sciences 600, 607, 613, 617, and two units of 525.
Supervised intervention practica with voice, fluency, and/or swallowing disorders. Up to two hours per week of client contact plus staffing. Up to three units may be taken concurrently. Maximum credit nine units.

SLHS 627. Advanced Field Clinical Practice in Speech-Language Pathology and Audiology (1-3) Cr/NC
Two hours of therapy, one hour of staffing, and Grand Rounds attendance once per month.
Prerequisite: Consent of instructor.
Supervised practica with speech-language-hearing problems in off-campus settings. Up to 10 hours per week of client contact plus staffing. Up to three units may be taken concurrently. Maximum credit nine units.

SLHS 672. Seminar in Communicative Disorders in Bilingual Adults (3)
Prerequisites: Speech, Language, and Hearing Sciences 600 and 609A.
Linguistic and cognitive system in normal bilingual adults compared to monolingual peers, and in bilingual adults with language disorders. Assessment and intervention strategies in bilingual adults’ communicative and cognitive disorders. Cross-cultural issues in selection of assessment and intervention procedures.
SLHS 673. Seminar in Communicative Disorders in Bilingual Spanish-English Children (3)
Prerequisites: Speech, Language, and Hearing Sciences 300 and demonstrated Spanish language competence.

SLHS 675. Augmentative Communication (2)
Prerequisite: Consent of instructor.
Alternative and augmentative approaches, strategies and technology for individuals with severe communication impairments. Assessment and intervention. Project required.

SLHS 676. Assistive Device Assessment Program for Communicatively Handicapped (2)
Prerequisite: Consent of instructor.
Assessment of communication skills of disabled individuals, environmental needs and appropriateness of augmentative communication aids. Remediation recommendations. Maximum credit four units.

SLHS 696. Selected Topics in Speech, Language, and Hearing Sciences (1-3)
Prerequisite: Graduate standing.
Intensive study in specific areas of audiology, education of hearing impaired, speech and hearing science, and speech-language pathology. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

SLHS 707. Seminar in Phonological Acquisition (3)
Prerequisite: Consent of instructor.
Theoretical, empirical, methodological, and applied issues associated with phonological acquisition of first-language learners, children with speech disorders, and second-language learners.

SLHS 750. Seminar in Language, Cognition, and the Brain: Sign Language Perspectives (3)
Prerequisite: Consent of instructor.
Sign language and deafness research applied to theoretical models of language representation and processing, language acquisition, bilingualism, and the neural organization of language.

SLHS 754. Seminar in Disorders of Speech Production (3)
Prerequisite: Consent of instructor.
Evaluation of research in disorders of speech production (apraxia, dysarthria, stuttering) from perceptual, acoustic, and physiologic perspectives. Includes models of motor control and speech production as a basis for understanding disorders.

SLHS 790. Seminar in Foundations of Language Science (3)
Prerequisite: Consent of instructor.
Current issues, theory, and research concerning language representation, processing, and neurological organization in adults and children.

SLHS 793. Seminar in Disorders of Language and Cognition/Children (3)
Prerequisite: Consent of instructor.
Language impairment in children, including primary versus secondary language impairment, modular versus processing explanations, relationships between language and cognition, as well as dissociations of development across different populations.

SLHS 794. Seminar in Language Disorders in Multilingual Populations (3)
Prerequisite: Consent of instructor.
Language disorders in linguistically diverse populations. Disorders of phonological, morphological, syntactic, and semantic aspects of target languages and their clinical implications.

SLHS 795. Advanced Research Practicum (3)
Prerequisites: Consent of instructor and approval of director of school.
Participation in a specific research activity under faculty supervision. Maximum combined credit of six units of Speech, Language, and Hearing Sciences 595 and 795.

SLHS 797. Research (1-3) Cr/NC/RP
Prerequisites: Consent of instructor and approval of director of school.
Research in speech-language pathology, deaf education or audiology. Maximum credit six units applicable to a master’s degree.

SLHS 798. Special Study (1-3) Cr/NC/RP
Prerequisites: Consent of instructor and approval of director of school.
Individual study. Maximum credit six units applicable to a master’s degree.

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

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

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

DOCTORAL COURSES

SLHS 897. Doctoral Research (1-15) Cr/NC/RP
Prerequisite: Admission to the doctoral program. Individual investigation to the general field of the dissertation.

SLHS 898. Doctoral Special Study (1-8) Cr/NC/RP
Prerequisite: Admission to the doctoral program. Individual study in the field of specialization. Maximum credit eight units applicable to the doctoral degree.

SLHS 899. Doctoral Dissertation (1-15) Cr/NC/RP
Prerequisites: An officially constituted dissertation committee and advancement to candidacy.
Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.

CREDENTIAL COURSE

SLHS 929. Orientation to Public School Practicum (1)
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).
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:

1. Complete Statistics 510, 670A, 670B with no grade less than B in
each course. These are core statistics courses.

2. Complete nine units of courses in statistics and biostatistics,
selected from the following with the approval of the graduate
adviser in statistics: Statistics 672, 673, 675, 676, 677, 678, 679, 680A,
680B, 696, 700, 701, 702, 795.

3. Complete three additional units of graduate level or approved 500-
level statistics courses, not including Statistics 799A.

4. Complete three additional units of graduate level or approved 500-
level courses offered by the Department of Mathematics and
Statistics, not including Statistics 799A.

5. Complete three units of approved electives.


7. The thesis option (Plan A) requires approval of the graduate
adviser and the statistics division faculty member who will chair the
thesis committee. Students who choose Plan A must include Statis-
tics 799A in the 31-unit program and are required to pass a final
oral examination on the thesis, open to the public.

8. In other cases, Plan B will be followed. Students who choose Plan
B are required to complete three additional units of 600- and 700-
numbered statistics courses, not including Statistics 799A, and
pass a comprehensive written examination. Policy and procedures
for the Plan B examination are documented and available from the
Department of Mathematics and Statistics.

Specific Requirements for the Master of Science Degree in Statistics with
Concentration in Biostatistics
(Major Code: 17021) (SIMS Code: 776370)

In addition to meeting the requirements for classified graduate
standing and the basic requirements for the master's degree as
described in Part Four of this bulletin, the student must meet the
following program requirements:

1. Complete Statistics 510, 670A, 670B with no grade less than B in
each course. These are core statistics courses.

2. Complete nine units of courses in statistics and biostatistics,
selected from the following with the approval of the graduate
adviser in statistics: Statistics 672, 673, 675, 676, 677, 678, 679, 680A,
680B, 696, 700, 701, 702, 795.

3. Complete three additional units of graduate level or approved 500-
level statistics courses, not including Statistics 799A.

4. Complete three additional units of graduate level or approved 500-
level courses offered by the Department of Mathematics and
Statistics, not including Statistics 799A.

5. Complete three units of approved electives.


7. The thesis option (Plan A) requires approval of the graduate
adviser and the statistics division faculty member who will chair the
thesis committee. Students who choose Plan A must include Statis-
tics 799A in the 31-unit program and are required to pass a final
oral examination on the thesis, open to the public.

8. In other cases, Plan B will be followed. Students who choose Plan
B are required to complete three additional units of 600- and 700-
numbered statistics courses, not including Statistics 799A, and
pass a comprehensive written examination. Policy and procedures
for the Plan B examination are documented and available from the
Department of Mathematics and Statistics.
The student should have completed before entering the program the following undergraduate coursework: three semesters of calculus, one semester of linear algebra, and one semester of probability theory. The student should also have working knowledge of a programming language before entering the program. Students lacking some of the above undergraduate coursework may be admitted conditionally and may make up this coursework during the first year of the program (these courses will not be counted toward the degree course requirements).

The student must complete a minimum of 31 units of coursework as described below. Upon entry to the program, the student will be assigned to a graduate adviser in biostatistics. Thereafter, the adviser will meet with the student each semester and discuss his or her academic program. A program of study must be approved by the graduate adviser in biostatistics.

1. Complete Statistics 510, 670A, 670B with no grade less than B in each course. These are core statistics courses.
2. Complete Statistics 680A, 680B with no grade less than B in each course. These are biostatistics concentration courses.
3. Complete at least six units of courses in biostatistics and statistics, selected from the following with the approval of the graduate adviser in biostatistics: Statistics 520, 560, 570, 580, 596, 672, 673, 676, 677, 678, 679, 696, 700, 701, 702, 795.
4. Complete at least six units of 500-level or graduate courses from a science of application of biostatistics (e.g., biocience, health science, or medical science), selected with the approval of the graduate adviser in biostatistics. If the student has an undergraduate degree in an area of application of biostatistics, 500-level or graduate mathematical sciences courses may be substituted with the approval of the graduate adviser in biostatistics.
5. Complete one unit of Statistics 720.
6. With approval of the graduate adviser and the faculty member who will chair the thesis committee, the student may choose Plan A and complete three units of Statistics 799A. The chair of the thesis committee must be a faculty member from a science of application of biostatistics (i.e., biocience, health science, or medical science). The student must pass an oral defense of the thesis, open to the public.
7. In other cases, Plan B will be followed. Students who choose Plan B are required to complete three additional units of 600- and 700-numbered statistics courses, not including Statistics 799A, and pass a comprehensive written examination. Policy and procedures for the Plan B examination are documented and available from the Department of Mathematics and Statistics.

Courses Acceptable on Master's Degree Programs in Statistics (STAT)

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

UPPER DIVISION COURSES

NOTE: Proof of completion of prerequisites required for all upper division courses: Copy of transcript.

STAT 510. Applied Regression Analysis (3)
Prerequisite: Statistics 350A or comparable course in statistics. Methods for simple and multiple regression models, model fitting, variable selection, diagnostic tools, model validation, and matrix forms for multiple regression. Applications of these methods will be illustrated with SAS, SPSS, and/or R computer software packages.

STAT 520. Applied Multivariate Analysis (3)
Prerequisite: Statistics 350B or comparable course in statistics. Multivariate normal distribution, multivariate analysis of variance, principal components, factor analysis, discriminant function analysis, classification, and clustering. Statistical software packages will be used for data analysis.

STAT 550. Applied Probability (3)
Prerequisites: Mathematics 151 and 254. Computation of probabilities via enumeration and simulation, discrete and continuous distributions, moments of random variables, Markov chains, counting and queuing processes, and selected topics.

STAT 551A. Probability and Mathematical Statistics (3)
Prerequisite: Mathematics 252. Discrete and continuous random variables, probability mass functions and density functions, conditional probability and Bayes' theorem, moments, properties of expectation and variance, joint and marginal distributions, functions of random variables, moment generating functions. Special distributions and sampling distributions.

STAT 551B. Probability and Mathematical Statistics (3)
Prerequisite: Statistics 551A. Point and interval estimation and hypothesis testing in statistical models with applications to problems in various fields.

STAT 560. Sample Surveys (3)
Prerequisite: Statistics 550 or 551A. Methods for design and analysis of sample surveys with applications to social and biological sciences. Simple random sampling, stratification and clustering, ratio and regression estimators, subsampling, selected topics in survey methodology.

STAT 570. Stochastic Processes (3)
Prerequisite: Statistics 551A. Introduction to stochastic processes with selected applications.

STAT 575. Actuarial Modeling (3)
Prerequisite: Statistics 550 or 551A. Actuarial models and applications of probability and statistics to insurance and other financial risks. Utility theory; risk models, compound processes; survival distributions and life tables; life insurance, annuities and benefits.

STAT 580. Statistical Computing (3)
Two lectures and two hours of activity. Prerequisite: Statistics 551B. Machine computation in development, application, and evaluation of advanced statistical techniques. Floating arithmetic and algorithm stability; numerical methods for parameter estimation (including maximum likelihood) and multivariate probability integration; simulation and other computer-intensive statistical techniques.

STAT 596. Advanced Topics in Statistics (1-4)
Prerequisite: Consent of instructor. Selected topics in statistics. May be repeated with the approval of the instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES

STAT 670A-670B. Advanced Mathematical Statistics (3-3)
Prerequisites: Statistics 551A. Statistics 670A is prerequisite to 670B. Distribution of random variables, characteristic functions, limiting distributions, sampling distributions, hypothesis testing and estimation, optimality considerations, applications of the linear hypothesis, invariance and unbiasedness to analysis of variance and regression problems, sequential techniques, decision theory.
STAT 672. Nonparametric Statistics (3)
Prerequisite: Statistics 551B or 670B.
Theory and application of commonly used distribution-free test statistics, including sign and Wilcoxon tests, and corresponding nonparametric point and interval estimators. Kruskal-Wallis and Friedman tests for analysis of variance, nonparametric regression methods, and other selected topics.

STAT 673. Time Series Analysis (3)
Prerequisite: Statistics 551B or 670B.

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
Mark M. Lautsen, Ph.D., Professor of Theatre, Television, and Film
Jack Ofield, Professor of Theatre, Television, and Film, Emeritus, Filmmaker in Residence
Timothy A. Powell, Ph.D., Professor of Theatre, Television, and Film
David A. Morong, M.F.A., Associate Professor of Theatre, Television, and Film

Associateships and Assistantships
Graduate teaching associateships and graduate assistantships are available to a limited number of qualified students. Application forms and further information may be obtained from the school.

General Information
The School of Theatre, Television, and Film offers graduate study leading to the Master of Arts degree in television, film, and media production. The degree prepares students for careers in creative areas of media design and production.

The School of Theatre, Television, and Film houses the Production Center for Documentary and Drama. Established in 1990, the center has produced over 305 national and regional television programs and non profit social, cultural, and institutional documentaries. These productions offer seniors and graduates opportunities to work in key roles (writer, director, line producer, crew, editor, composer, graphic design, etc.). The center exists to serve the school, university and community, to mentor senior and graduate film/video projects, and develop forums for their exhibition. An example is the Emmy Award-winning, “The Short List,” the long-running public TV showcase for U.S. and international short film, produced in the Production Center since 1992.

Filmmaker in Residence
The position of Filmmaker in Residence is unique in the CSU system. It was established to provide a professional link between the Television and Film program and the media industry in a rapidly evolving technological environment. The Filmmaker in Residence is the film and television producer, Jack Ofield.

Master of Arts Degree in Television, Film and New Media Production
The School of Theatre, Television, and Film, in the College of Professional Studies and Fine Arts, offers graduate study leading to the Master of Arts degree in television, film and new media production. This degree stresses hands-on creative endeavor. It is especially useful for those pursuing careers in film, television, radio, new media, or related production activities where sophisticated and disciplined ability to conceive, initiate and complete original media is required. Graduates of this program gain the essential education, technical training, and creative experience necessary for professional careers, further study in the field, and/or professional careers in teaching. This degree offers advanced study in the history and criticism of broadcasting and film; screenwriting; financing, preproduction, and postproduction; advanced audio, video, and film production; production design and art direction; international cinema; and development of production expertise in a wide range of emerging communication technologies. The Master of Arts degree in television, film and new media production emphasizes advanced media design and production. Admission to this degree program requires undergraduate preparation, documented through submission of a portfolio reel of previous creative activity or other evidence of relevant creative activity. Postbaccalaureate students who are without previous media production education or experience and who wish to learn television and film production should consider pursuing a second bachelor’s degree in media production or completing basic production courses elsewhere before enrolling in graduate study at San Diego State University.

Teaching facilities in the School of Theatre, Television, and Film include a large state-of-the-art television studio, digital editing suites, Foley room, animation suite, scene shop and an equipment checkout center stocked with film and digital cameras and recording equipment, lighting, and grip equipment. Major public broadcasting stations, KPBS-TV and KPBS-FM, are located on campus and offer internship opportunities. The university operates a campuswide, closed-circuit, instructional television service and Multimedia Center, and is also home to the International Center for Communications and a student-operated radio station. San Diego offers abundant internship opportunities in production companies and television and radio stations, such as the leading cable carrier, Cox Communications.

Admission to Graduate Study

Students will be admitted for the fall semester only. Application packages must be received and complete by the previous March 1.

In addition to meeting the general requirements for admission to the university with classified graduate standing, as outlined in Part Two of this bulletin, students applying for admission to the Master of Arts degree in television, film and new media production are evaluated according to the following criteria:

1. Undergraduate major or minor in television, film, or a related communication discipline. Those lacking adequate undergraduate preparation or equivalent professional experience for the program should consider enrolling in media courses at community colleges or in intensive craft training programs before applying to the television, film and new media production program.

2. Minimum grade point average of 3.0 (when A equals 4.0) in the last 60 semester (90 quarter) units attempted (this calculation may not include lower division courses taken after award of a baccalaureate degree).

3. All applicants must post a Graduate Record Examination (GRE) verbal score of 450 or higher; a GRE quantitative score of 450 or higher; a combined GRE verbal and quantitative score of 950 or higher; and a GRE writing assessment (GRE-W) of level 4 or higher. For applicants deficient in the GRE quantitative, a score of 450 or higher on the GRE analytic may be substituted.
4. For international applicants for whom English is not their first language, English language paper scores of 550 (or 213 online) or higher and a Certificate in Advanced English (CAE), indicating successful passage of the reading, writing, listening, and English usage test offered by the Cambridge English for Life (EFL) testing program.

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

Graduate Admissions
The following materials should be submitted together directly to:

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

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

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

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

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

School of Theatre, Television, and Film
The following materials should be submitted by March 1 for the fall semester to:

School of Theatre, Television, and Film
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7601

(1) Three letters of recommendation. At least one letter from an academic reference and at least one letter from a professor or professional acquainted with the applicant’s creative activities;

(2) A resume that includes any film and/or video production experience you have had;

(3) The best evidence applicant can provide of creativity relevant to media productivity, technical skill level, and command of the medium. Generally, a sample reel is the most useful. The sample reel should be a DVD (NTSC, region 0 or 1) of work in which applicant held a key creative role (writer/director, cinematographer, editor, sound designer, production designer). Credits must be clearly indicated. Even though long work may be submitted, no more than 10 minutes of the work provided will be viewed, so cue, or specify appropriate cueing, of sample. In lieu of a sample reel, other examples might include a sample of original textual work (play, story, or screenplay for writers/directors) or visual material (drawings, storyboards, designs, or studio photography that may reflect lighting, framing, or composition skills);

(4) A list, by author and title, of six books (novels, plays, essays) that have influenced applicant artistically;

(5) A list of three films (narratives, documentaries, experimental), plays or television programs that applicant admires, devoting one paragraph to each work;

(6) A list and description (in a sentence) of applicant’s hobbies and interests outside of film, video, and theatre;

(7) Personal Statement: A short essay describing your creative and career goals and how you think this program will benefit you. (Maximum two pages.)

Admission to the program is competitive, and satisfying these requirements does not guarantee admission. The decision to admit is based on consideration of the entire application file; promising applicants in unusual circumstances are encouraged to apply.

Admission to the program is competitive, and satisfying these requirements does not guarantee admission. The decision to admit is based on consideration of the entire application file; promising applicants in unusual circumstances are encouraged to apply.

Students accepted for graduate study in the Master of Arts degree in television, film and new media production are initially admitted with conditional graduate standing (classified). Full classified standing is awarded only after the student has completed Television, Film and New Media 600 with a grade of B or better.

Advancement to Candidacy
In addition to meeting the general requirements for advancement to candidacy described in Part Four of this bulletin, students seeking the Master of Arts in television, film, and new media production must complete Television, Film and New Media 600 with a grade of B or better prior to advancement.

Specific Requirements for the Master of Arts Degree
(Major Code: 06031) (SIMS Code: 667307)

Candidates for the Master of Arts degree in television, film and new media production must complete 30 units of coursework to include the following:

1. Television, Film and New Media 799A (Plan A, the thesis option, is required of all students in the program), Television, Film and New Media 600 (required for classified graduate standing), 615, and 660.
2. With approval of the graduate adviser, 18 additional graduate units in Television, Film and New Media, Theatre, and other departments, of which nine units must be at the 600-700 level.
3. No more than nine units of electives outside the School of Theatre, Television, and Film.

Courses Acceptable on Master’s Degree Program in Television, Film and New Media Production (TFM)

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

UPPER DIVISION COURSES

TFM 510. Advanced Script Writing for Television and Film (3)
Prerequisite: Television, Film and New Media 314 (or consent of instructor).
Scripting of dramatic original and adaptation forms, and documentary. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

TFM 522. Advanced Film and Television Cinematography (3)
Two lectures and three hours of laboratory.
Prerequisite: Television, Film and New Media 314 (or consent of instructor).
Advanced theory and practice of cinematography for film and television production. Lighting for mood and character; camera movement for story telling; and new techniques in film, digital, and HD formats. Careers in the purely visual aspects of film making. (Not the same course as Television, Film and New Media 522 in the 2004-05 catalog and previous SDSU catalogs.)

TFM 530. Selected Topics in Genre Studies for Television and Film (3)
Film and television genres (noir, western, comedy, musical, science fiction, soap opera, etc.) including key media texts, aesthetics, themes, history, and social context. May be repeated with new course content. See Class Schedule for specific content. Maximum credit six units.
TFM 540. Documentary Production (3)
Two lectures and three or more hours of activity.
Prerequisites: Television, Film and New Media 314 and 361.
Hands-on field experiences in documentary production to include research, and writing techniques, investigative procedures, interviewing, shooting and editing. Analyze significant documentaries. (Formerly numbered Television, Film and New Media 340.)

TFM 550. Art Direction for Television and Film (3)
One lecture and four hours of activity.
Prerequisites: Television, Film and New Media 350; 360 or 361 for television, film and new media majors, and Theatre 440 for theatre majors, and consent of instructor. Proof of completion of prerequisites required: Copy of transcript.
Aesthetic, technical, and practical aspects of design for television and film. Experience in scenic design, graphics, set decoration, budgeting, and scheduling.

TFM 551. Production Design for Television and Film (3)
Prerequisites: Television, Film and New Media 350 and credit or concurrent registration in Television, Film and New Media 401.
Theory and analysis of production design concepts for television and film. Development of designs and analysis of technical requirements for fictional and nonfictional productions.

TFM 560. Advanced Film (3)
Two lectures and more than three hours of activity.
Prerequisites: Television, Film and New Media 314 (or consent of instructor), 360, and 361.
Practicum in direction and production of dramatic and 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.
Prerequisite: Television, Film and New Media 314 (or consent of instructor).
Production processes and techniques to include producing, critical analysis, directing, digital cinematography, and editing of scripted projects. Experience in individual and university-sponsored productions.

TFM 565. Animated Film and New Media Techniques (3)
Two lectures and more than three hours of activity.
Computer animation production and practical experience in digital postproduction technologies.

TFM 571. Selected Topics in Director Studies (3)
Prerequisite: Television, Film and New Media 310.
Historical significance of and theoretical approaches to major media directors (Welles, Hitchcock, Spielberg, etc.) including breadth of work, cultural and generic contexts, aesthetic innovation, and recurring themes. May be repeated with new content. See Class Schedule for specific topic. Maximum credit six units.

TFM 573. Selected Topics in History of Film, TV, and Media (3)
Prerequisite: Television, Film and New Media 310.
Media history including cultural and generic developments, patterns of exhibition, technological influences, significant creative and industrial figures, commercial and social contexts. May be repeated with new content. See Class Schedule for specific topic. Maximum credit six units.

TFM 590. Directing for Film and Television (3)
One lecture and six hours of activity.
Prerequisite: Television, Film and New Media 314 (or consent of instructor).
Directing fundamentals and production to include script analysis, director’s preparation and directing actors. (Formerly numbered Television, Film and New Media 390.)

TFM 596. Selected Topics in Television, Film and New Media (1-4)
Prerequisite: Twelve units in television, film and new media.
Specialized study of selected topics from the areas of television, film and new media. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

TFM 600. Seminar: Research and Bibliography in Media Production (3)
Methods of research, telecommunication 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: Equivalency 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 Reinholtz, M.F.A., Professor of Theatre, Television, and Film, Director of School
Ralph Funicello, B.F.A., The Don W. Powell Chair in Scene Design
Anne-Charlotte Harvey, Ph.D., Professor of Theatre, Emeritus
Paula Kalustian, M.F.A., Professor of Theatre, Television, and Film
(Graduate Adviser)
Margaret C. Larlham, M.A., Professor of Theatre, Television, and Film
Peter F. Larlham, Ph.D., Professor of Theatre, Television, and Film
Loren P. Schreiber, M.F.A., Professor of Theatre, Television, and Film
Peter J. Cirino, M.F.A., Associate Professor of Theatre, Television, and Film
Donald J. Hopkins, Ph.D., Associate Professor of Theatre, Television, and Film
Danielle J. Bedau, M.F.A., Assistant Professor of Theatre, Television, and Film
Denitsa D. Bliznakova, M.F.A., Assistant Professor of Theatre, Television, and Film
Rick A. Simas, Ph.D., Musical Theatre Specialist

Associateships and Assistantships
Graduate teaching associateships and graduate assistantships are available to a limited number of qualified students. Application forms and further information may be obtained from the school.

The Don W. Powell Chair in Scene Design
The Don W. Powell Chair in Scene Design was established through a trust provided by the late professor emeritus. Always concerned about students, Powell, who retired after 30 years with the theatre department, created the trust in order to enhance theatre education at S.D.S.U. The current Don W. Powell Scene Design Chair is the nationally acclaimed designer Ralph Funicello.

General Information
The School of Theatre, Television, and Film offers graduate study leading to the Master of Arts degree and the Master of Fine Arts degree in theatre arts. Graduates in these programs learn in the artist-scholar model and are prepared for careers as practitioners and educators. The Master of Fine Arts degree is offered in the areas of acting, design/technical theatre, and musical theatre. The M.A. is a 30-unit program; the M.F.A., a 60-unit program. Both programs of study limit the number of students accepted in order to offer individual attention and extensive opportunity to participate in theatre production. The Dramatic Arts building contains the proscenium-style Don Powell Theatre seating 500, with state-of-the-art computer lighting and sound control, and the flexible Experimental Theatre seating 200, rehearsal and recording areas, a design studio and CADD laboratory, paint shop, wagon house, scene shop, and fully equipped costume laboratory. The theatre arts degree is accredited by the National Association of Schools of Theatre (N.A.S.T.).

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

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

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

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

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

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

Master of Arts Degree in Theatre Arts
The following materials should be mailed or delivered to:
School of Theatre, Television, and Film
(Attention: M. A. Program)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7601

(1) Three current and relevant letters of recommendation from individuals familiar with the applicant's academic ability.

Master of Fine Arts Degree in Theatre Arts
Concentration in Acting
No students admitted to program at this time.

Master of Fine Arts Degree in Theatre Arts
Concentration in Design and Technical Theatre
The materials as outlined under Admission to the Degree Curriculum should be mailed or delivered to:
School of Theatre, Television, and Film
(Attention: Design Program)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7601

Master of Fine Arts Degree in Theatre Arts
Concentration in Musical Theatre
This program admits new students every other year only.

The materials as outlined under Admission to the Degree Curriculum should be mailed or delivered to:
School of Theatre, Television, and Film
(Attention: Musical Theatre Program)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7601
Master of Arts Degree in Theatre Arts

Admission to the Degree Curriculum

General requirements for admission to the university with classified graduate standing are described in Part Two of this bulletin. In addition, the student’s area adviser will judge the applicant capable of graduate work in theatre arts. The judgment will be based on (1) the applicant’s transcripts of prior academic work; (2) three current and relevant letters of recommendation from individuals familiar with the applicant’s academic ability; (3) the applicant's scores on the GRE General Test; (4) the applicant’s scores on the GRE Writing Assessment Test; and (5) an interview, when appropriate, revealing the applicant's ability to succeed in the chosen area. Application deadline is February 1. To inquire about the program, including spring admission, contact the director of the M.A. program. Visit our Web site at http://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.

Concentration in Acting

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.

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.

Concentration in Musical Theatre

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.

This program admits new students every other year only.
Eleven units of electives selected by student and adviser from graduate level courses in the following areas: theatre, art, music, English and comparative literature, history, and television, film, and new media. In special circumstances courses acceptable for graduate credit in other departments may be selected with the approval of the student's adviser.

Candidates must prepare a production thesis project approved by their adviser. This project may be supported by a written thesis project report (analysis/apologia) or by an original body of work of theatrical design accompanied by a written report.

Concentration in Musical Theatre
(SIMS Code: 662587)

Candidates for the M.F.A. with a concentration in musical theatre, in addition to meeting the requirements for classified graduate standing, must complete a 60-unit graduate program which includes a core of courses totaling 48 units as follows: Theatre 555B (maximum credit eight units), 600A, 600B, 620A, 620B, 622A, 622B, 623, 627 (maximum credit 16 units), 630 (maximum credit four units), 650, and 659. The student must also complete nine units of Theatre 746 (internship), 795 (practicum), and (Plan A) 799A (thesis/project report) or (Plan B) 790 (preparation for comprehensive examination).

Three additional units are to be selected with the approval of the student’s graduate adviser from courses acceptable for graduate credit.

Candidates will either: (Plan A) successfully prepare a written thesis project report or (Plan B) successfully complete a comprehensive examination.

Courses Acceptable on Master's Degree Programs in Theatre Arts (THEA)

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

UPPER DIVISION COURSES

THEA 510. Creative Drama and Language Arts (3)
Prerequisite: Theatre 310 or 315.
Advanced techniques in using creative drama to teach literature and language. Emphasis on use of drama in teaching of reading and world literature. Practical experience through fieldwork in elementary or middle school classrooms.

THEA 523. Stage Combat (2)
Four hours of activity.
Prerequisites: Theatre 355 and by audition.
Skills and choreography of armed and unarmed stage combat. Performance application to selected scenes from world drama.

THEA 525. Dramaturgy (3)
Prerequisite: Theatre 325 or graduate standing.
Theory and application of various aspects of dramaturgy and theatre literary management. Production-oriented synthesis of advanced 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 cultural significance of period dress, architecture, and decorative arts as applied to theatrical productions. Emphasis on significant historic periods in dramatic literature. Theatre 530A is not open to students with credit in Theatre 530.

A. Ancient World Through Eighteenth Century
B. NeoClassical Through Twentieth Century

THEA 532. Advanced Acting and Directing (3)
Prerequisites: Theatre 332 and either Theatre 320 or 355.
Problems in characterization in contemporary drama, and in plays of Ibsen, Strindberg, Chekhov, and Shaw. Maximum credits six units.
THEA 533A-533B. Theory and Styles in Acting and Directing I and II (3-3)
Prerequisites: Theatre 332 and either Theatre 320 or 355.
Acting and directing problems in theory and style related to the production of plays from great periods in theatre history, with attention to characterization, dramatic values, creative directing, and production approaches.

THEA 539. Theatre Rendering (2)
Four hours of activity.
Prerequisite: Theatre 240.
Rendering for scenic, costume, and lighting designer. Techniques, media, and portfolio preparation. Maximum credit four units.

THEA 540. Scene Design II (3)
Prerequisites: Theatre 440 and 530A or 530B.
History of scene design and application of contemporary styles to various types of dramatic production.

THEA 541. Scene Painting (2)
Four hours of activity.
Prerequisite: Theatre 530A or 530B.
Theories and techniques of scene painting, including both historical backgrounds and modern procedures. Full-scale projects executed in scenery studio.

THEA 545. Mechanical Drawing for the Theatre (2)
Four hours of activity.
Prerequisite: Theatre 240 or admission to MFA in Design. Theatre drafting standards and techniques. Floor plans, sections, elevations, perspective drawings, and light plots.

THEA 546. CADD for the Theatre (2)
Four hours of activity.
Prerequisite: Theatre 545.
Computer aided drafting applications for theatre designer.

THEA 547. Lighting Design II (3)
Two lectures and three hours of laboratory.
Prerequisite: Theatre 447.
Advanced design theories and lighting practice for theatre and dance. Laboratory and production related activities.

THEA 548. Sound Design for the Theatre (3)
Two lectures and two hours of activity.
Prerequisites: Theatre 240, 325.
Theories and techniques of sound design and reinforcement for theatrical performance. Laboratory experience in sound production.

THEA 549. Lighting and Sound Technology (2)
One lecture and three hours of laboratory.
Prerequisite: Theatre 447.
Use of electrics for the stage. Lighting, sound, computer. Practical applications emphasized.

THEA 550. Software for Theatrical Design (2)
Four hours of activity.
Prerequisites: Theatre 440, 447, 452, or 546.
Application of computer software for theatre, including scenery, costume, lighting, and sound design. Maximum credit four units.

THEA 552. Costume Design II (3)
Prerequisites: Theatre 452 and 530A or 530B.
Advanced studies in costume design. Emphasis on theatrical style, rendering layout, design problems, materials, and budget.

THEA 553. Technical Direction (3)
Two lectures and three hours of activity.
Prerequisites: Theatre 240, 442.
Modern technical direction including project management (budgeting and procurement, managing employees); design and engineering; automation, rigging, advanced stagecraft (metalcraft, CNC machinery, composite construction), and safety. Maximum credit six units.

THEA 554A. Costume Design Technology I (2)
Four hours of activity.
Prerequisite: Theatre 240.
Current materials and practices of costume technology: advanced construction techniques, fabric selection and use, period pattern drafting, draping, and cutting. Maximum credit four units.

THEA 554B. Costume Design Technology II (2)
Four hours of activity.
Prerequisite: Theatre 240.
Advanced costume craft construction techniques and management procedures for costume production: millinery, fabric dyeing and painting, jewelry, and related crafts. Maximum credit four units.

THEA 555A. Movement for the Theatre II (2)
Four hours of activity.
Prerequisites: Theatre 332 and 355.
Movement techniques for the theatre. Movement patterns, phrase development, and partnering leading to scene work. Maximum credit four units.

THEA 555B. Movement for the Theatre II (2)
Four hours of activity.
Prerequisite: Theatre 447.
Musical theatre movement and dance styles. Maximum credit eight units.

THEA 570. Practicum in Theatrical Production (1-3)
Prerequisite: Theatre 440, 447, or 452; or admission to MFA in Design.
Design projects in areas of scenery, costume, lighting, sound, or makeup. Maximum credit six units for Theatre 570A and six units for Theatre 570B.
   A. Independent Study
   B. Design for Department Public Performances

THEA 580. Theatre in the Classroom (3)
Prerequisites: Theatre 310 and 315.
Methods of teaching theatre in elementary, middle, and secondary schools. Emphasis on pedagogy, organization of curriculum, play selection, and principles of producing plays in the classroom.

THEA 596. Selected Topics in Theatre (1-3)
Prerequisite: Twelve units in theatre.
A specialized study of selected topics from the areas of theatre. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES
THEA 600A. Research and Bibliography (2)
Basic reference works, scholarly and critical journals; introduction to bibliographical techniques; exercises and problems in methods and exposition of research as it relates to the various areas of theatre. Recommended for first semester of graduate work, and prerequisite to advancement to candidacy.

THEA 600B. Thesis Preparation (1)
Prerequisite: Theatre 600A.
Development and presentation of thesis with focus on writing and formal parameters.

THEA 610. Seminar in 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.
Representative works from musical theatre analyzed in terms of dramatic and musical aesthetics.
THEA 630. Individual Vocal Instruction (1)
Prerequisite: Admission to M.F.A. musical theatre program.
Individual voice instruction/coaching for students in M.F.A. musical theatre program. Maximum credit four units.
THEA 642. Theatre Practicum Skills (1) Cr/NC
Prerequisite: Admission to M.F.A. in design and technical theatre program.
Design projects for department productions. To be arranged with area adviser. Should be repeated each semester during the first two years of study for maximum credit four units.
THEA 643. Collaborative Studies in Design (3)
Prerequisite: Admission to M.F.A. design and technical theatre program. This course must be repeated each semester by the M.F.A. design student for a maximum of 12 units.
Design of theatrical productions with emphasis on artistic collaboration and integration of scenery, costumes, and lights. Attention to graphic presentation techniques as well as designs produced.
THEA 644. Seminar in Contemporary Designers (3)
Prerequisite: Theatre 643.
Major set, costume, and lighting designers working in contemporary theatre, film, and television.
THEA 645. Seminar in Theatrical Lighting (3)
Prerequisite: Theatre 643.
Aesthetics of stage lighting as it applies to the areas of scenery and costume design. Exploration of literature in the field of theatrical lighting. Investigation of commercial and architectural lighting. Projects involving use of color and distribution of light.
THEA 647. Seminar in History of Theatre and Drama (3)
Prerequisite: Admission to M.A. or M.F.A. theatre arts program.
A. British and Continental Theatre
B. American Theatre
THEA 649. Topics in World Theatre (1-3)
Prerequisite: Admission to M.A. or M.F.A. theatre arts program.
Intensive study in specific areas of world theatre. Forms, technologies, genres, cultural expressions, and contemporary developments. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to the M.A. or M.F.A. degree in theatre arts.
THEA 650. Seminar in Musical Theatre Dance History (3)
Prerequisite: Admission to M.F.A. musical theatre program.
Study of choreographic styles of musical theatre.
THEA 659. Musical Theatre Stage Direction (3)
Prerequisite: Admission to M.F.A. musical theatre program.
Special problems in directing for the musical theatre.
THEA 746. Theatre Internship (3) Cr/NC
Prerequisites: Theatre 621 and consent of graduate coordinator and program director.
Professional field experience in areas of design/technical theatre, acting, directing, musical theatre, and theatre for young audiences. (Formerly numbered Drama 746B.)
THEA 790. Directed Readings in Theatre Arts (3) Cr/NC
Prerequisite: Advancement to candidacy.
Preparation for the comprehensive examination for those students in the M.F.A. program under Plan B.
THEA 795. Practicum in Theatre Arts (1-6)
Prerequisite: Theatre 621.
Faculty supervised projects leading to public presentation. Maximum credit six units.
THEA 798. Special Study (1-3) Cr/NC/RP
Prerequisite: Project/assignment to be arranged with area adviser.
Individual study. Maximum credit six units applicable to a master’s degree.
THEA 799A. Thesis or Project (3) Cr/NC/RP
Prerequisites: An officially appointed thesis committee and advancement to candidacy. Theatre 795 (Practicum in Theatre Arts) is a prerequisite if the student elects the preparation of a project.
Preparation of a project report or thesis for the master’s degree.
THEA 799B. Thesis or Project Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.
Registration required in any semester or term following assignment of RP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.
THEA 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program courses.
Registration required of students whose only requirement is completion of the comprehensive examination for the master’s degree. Registration in 799C limited to two semesters.
Women’s Studies
In the College of Arts and Letters

OFFICE: Arts and Letters 346
TELEPHONE: 619-594-6524
http://www-rohan.sdsu.edu/dept/wsweb/masters.html

Faculty
Huma Ahmed Ghosh, Ph.D., Professor of Women’s Studies, Chair of Department
Susan E. Cayleff, Ph.D., Professor of Women’s Studies
Anne Donadey, Ph.D., Professor of French and Women’s Studies
Esther D. Rothblum, Ph.D., Professor of Women’s Studies
Bonnie K. Scott, Ph.D., Professor of Women’s Studies
Elizabeth A. Colwill, Ph.D., Associate Professor of Women’s Studies (Graduate Adviser)
Irene Lara, Ph.D., Associate Professor of Women’s Studies
Doreen J. Mattingly, Ph.D., Associate Professor of Women’s Studies
Anh N. Hua, Ph.D., Assistant Professor of Women’s Studies
Kimaila 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 CSU Mentor application and the GRE; March 1 for all other materials. All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. As an additional requirement, students must demonstrate sufficient preparation for the program. This preparation can include possession of a bachelor’s degree in women’s studies from an accredited institution or completion of sufficient units in women’s studies and related fields. Evaluation of a student’s transcript will be made on an individual basis by the admissions committee to determine whether evidence of sufficient preparation can be demonstrated. A student whose preparation is deemed insufficient by the Graduate Admissions Committee may be admitted as conditionally classified and will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

The grade point average required for admission to the M.A. program in women’s studies is 3.0 for the last 60 units of the student’s undergraduate work, plus satisfactory scores on the verbal and quantitative sections of the GRE.

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

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Women’s Studies.

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

(1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;
Note:
• Students who attended SDSU need only submit transcripts for work completed since last attendance.
• Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.
(2) GRE scores (http://www.ets.org, SDSU institution code 4682).
No graduate application will be considered complete without these scores.
(3) English language score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).

Department of Women’s Studies
The following materials should be mailed or delivered to:
Department of Women’s Studies
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-8138

(1) Two letters of reference from individuals with direct knowledge of the applicant’s scholarly ability;
(2) A personal statement of background, intentions, and goals, including experience in women’s studies and with women’s issues, rationale for pursuing the M.A. degree, and relation of the M.A. degree in women’s studies to prior academic work and 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 courses.
Women's Studies

603, 604, 605, 606, 607, 608, 609, 610, 611, 696, 701; Women's Studies 797 and 799A (for Plan A Thesis); and a theme of study composed of nine units of graduate electives, selected with the approval of the graduate adviser. The theme may include courses in departments other than women's studies. Students will be expected to pursue Plan A, which requires presentation of an acceptable thesis or project. With the approval of the graduate adviser, a student may select Plan B, comprehensive examination. When Plan B is chosen, three additional graduate units in women's studies shall be selected in lieu of 799A. Other substitutes may be approved where the skills involved are directly related to the student's research interests. Course selection and programs must be approved by the graduate adviser.

Students may choose an international specialization consisting of nine units of graduate courses selected from Women's Studies 512, 530, 560, 580, 581, 605, 607, 609, 611. Other graduate level courses may be included in the international specialization with the approval of the graduate adviser.

Certificate in Women's Studies

The Department of Women's Studies offers an advanced certificate in women's studies to provide an opportunity for students to increase their understanding of women in the humanities and social sciences. The certificate program addresses diverse ways for students to develop knowledge of how women lived, thought, resisted, created knowledge, and engaged in cultural activism. The advanced certificate requires 12 units, to include Women's Studies 590.

Nine units can be selected within an area of specialization to include six units of 600 or 700-level courses. The electives for the three specializations – International, Health and Sexualities, Gender, Race, and Class are as follows:


For further information, contact the graduate adviser in the Department of Women's Studies at 619-594-6524 or visit http://www-rohan.sdsu.edu/dept/wsweb/.

Courses Acceptable on Master's Degree Program in Women's Studies (WMNST)

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

UPPER DIVISION COURSES

WMNST 512. Latinas in the Americas (3)
Prerequisite: Three upper division units in women's studies.
How social and other factors impact the lives of Latin American women. Theoretical frameworks illuminate their situation. Sociocultural perspectives are offered on Latin American women’s life narratives.

WMNST 515. Women: Myth, Ritual, and the Sacred (3)
Prerequisite: Three upper division units in women's studies.
Meanings and functions of myths and rituals in their sacred and secular aspects, emphasizing their impact on women’s lives and relationships in differing cultural contexts, past and present.

WMNST 520. Reproductive Rights and Justice (3)
Prerequisite: Three upper division units in women's studies.
History, cultural attitudes, and politics of reproduction and sexual health to include abortion, contraception, sterilization, sexuality transmitted diseases (STDs), HIV/AIDS, sex education, reproductive, and genetic technology.

WMNST 522. Women: Madness and Sanity (3)
Prerequisite: Three upper division units in women's studies.
Mental health and mental illness in literature, film, and psychological research. Clinical and feminist approaches to mental health issues in women’s lives.

WMNST 530. Women’s Movements and Activism (3)
Prerequisite: Three upper division units in women's studies.
Comparative study of women's movements worldwide, including organizations, issues and initiatives. Women's diverse social/political strategies within local, national, and global contexts. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

WMNST 535. Lesbian Lives and Cultures (3)
Historical, cultural, and social exploration of lesbianism. Topics include myths and stereotypes, history and literature, social and political movements, theoretical explanations, and current conditions.

WMNST 536. Gender, Race, and Class (3)
Prerequisite: Three upper division units in women's studies.
Intersection theories of gender, race and class in both local and global contexts. Major themes in history, culture, and contemporary lives of women analyzed through feminist and critical race theories.

WMNST 540. Women and the Environment (3)
Prerequisite: Three upper division units in women's studies.
Women environmental activists and authors including those in diverse communities, settings, and alliances (native American, British colonial, Asian, American environmental movements, urban environmental justice).

WMNST 545. Women and Sports (3)
Prerequisite: Three upper division units in women's studies.
Diverse women’s creation of and involvement in recreational and competitive sports, mid-1800s to present to include impact of medical experts’ views, homophobia, disability, individual elite athletes, team sports, economic viability, and changes since Title IX.

WMNST 553. Women and the Creative Arts (3)
Prerequisite: Three upper division units in women's studies.
Representations of women in literary, visual, and/or performing arts as well as crafts; artistic contributions of women across cultures; theories of creativity and gender. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

WMNST 560. Women in Muslim Societies (3)
Prerequisite: Three upper division units in women's studies.
Socio-political status of women in Muslim societies in Middle East, North Africa, and Asia; women in the Quran; Muslim women’s movements.

WMNST 565. Women: Health, Healing, and Medicine (3)
Prerequisite: Three upper division units in women's studies.
Relationship of women to “modern” and “traditional” health care/healing systems in historical and cultural perspective. Representations and practices regarding the politics of women’s health and illness.

WMNST 572. Women and Violence (3)
Prerequisite: Three upper division units in women's studies.
Forms of violence against and by women. Processes which shape women’s resistance to, and collusion in, social, economic, political, and sexual violence.

WMNST 580. Women, Development, and the Global Economy (3)
Prerequisite: Three upper division units in women's studies.
Women’s roles as agents and recipients of global economic and political change focusing on women’s empowerment, work, health, and the environment. Topics include women’s movements worldwide and non-governmental organizations.

WMNST 581. Women’s Experiences of Migration (3)
Prerequisite: Three upper division units in women's studies.
Gender analysis of impact of international migration on women’s lives. Identity formation, trauma, language, gender roles, and sexuality in life narratives of immigrant and refugee women. Economic and legal issues affecting immigrant and refugee women.

WMNST 582. Feminist Science Studies (3)
Prerequisite: Three upper division units in women's studies.
Feminist philosophy of science, history of science, and social studies of science. Feminist critiques of science and technology to include patented life forms, reproductive technologies, genetic engineering and cyberfeminism.
Women’s Studies

WMNST 590. Feminist Thought (3)
Prerequisite: Six upper division units in women’s studies.
Readings of feminist theory in historical perspective, with attention to contemporary debates in feminist scholarship.

WMNST 596. Topics in Women’s Studies (3)
Prerequisite: Consent of instructor.
Advanced topics in women’s studies. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

WMNST 597. Research Project (3)
Prerequisites: Six upper division units in women’s studies and consent of adviser.
Individual research project.

WMNST 598. Women’s Studies Internship (3) Cr/NC
Prerequisites: Three upper division units in women’s studies and consent of instructor.
Application of women’s studies theories and scholarship to community service and activism. Internship includes 120 hours of work in local public and private agencies serving women and girls. Maximum credit six units.

GRADUATE COURSES

WMNST 601. Foundations of Feminist Scholarship (3)
Prerequisite: Classified graduate standing.
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; design of research proposals.

WMNST 603. Seminar: Advanced Feminist Theory (3)
Prerequisite: Classified graduate standing.
Analysis of categories of contemporary feminist theory including concepts of identity and difference; theories of subjectivity; feminist discourses, strategies, and practices.

WMNST 604. Seminar: Gender, Culture, and Representation (3)
Prerequisite: Classified graduate standing.
Representations of women, gender, and femininity in literature, art, music, and other cultural productions. Interconnection between representations of gender, race, ethnicity, class, and sexualities. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

WMNST 605. Seminar: Women, Relationships, and Social Policy (3)
Prerequisite: Classified graduate standing.
Theories of women’s friendships and family relationships; relationship development in historical and cross-cultural context; effects of social policies on women’s relationships.

WMNST 606. Seminar: Narrating Women’s Lives (3)
Prerequisite: Classified graduate standing.
Exploration of women’s biographies and autobiographies. Theories of narration, identity construction, and oral and written life histories. Interconnection between self-presentation and social, historical, and multicultural institutions and discourses.

WMNST 607. Seminar: Privilege and Oppression (3)
Prerequisite: Classified graduate standing.
How gender, culture, ethnicity, class, religion, sexualities, and physical challenges define interplay of privilege and oppression. Theoretical and practical implications discussed.

WMNST 608. Seminar: Body Politics (3)
Prerequisite: Classified graduate standing.
Historical exploration illuminates contemporary and past constructions of female, male, and transgendered sexualities. Facilitates ability to critique “innate” vs. culturally constructed behaviors and identities. Key institutions that control and define the body explored: labor, race, economics, law, and medicine.

WMNST 609. Seminar: Transnational Economics and Gender (3)
Prerequisite: Classified graduate standing.
Globalization of economy with focus on women’s lives. Case studies of effect of transnational economic processes on women and role of gender in shaping these processes.

WMNST 610. Seminar in Sexuality (3)
Prerequisite: Classified graduate standing.
Sexuality and gender identity in diverse individual, social, political, and cultural contexts.

WMNST 611. Seminar: Gender and Diaspora (3)
Prerequisite: Classified graduate standing.
Historical and interdisciplinary perspectives on gendered impact of forcible migration (African, Jewish, Asian). Scholarly debates concerning influence of men’s and women’s experiences of diaspora on modern political identities, social movements, and cultural production. May be repeated with new content. See Class Schedule for specific content. Maximum credit of six units.

WMNST 696. Selected Topics in Women’s Studies (3–6)
Prerequisite: Classified graduate standing.
Intensive study in specific areas of women’s studies, with emphasis on theoretical and methodological issues. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

WMNST 701. Seminar in Women’s Studies (3)
Prerequisite: Classified graduate standing.
Interdisciplinary seminar integrating research in various areas of women’s studies in humanities, social sciences, arts and/or sciences. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

WMNST 797. Research (1-3) Cr/NC/RP
Prerequisites: An officially appointed thesis committee 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.

European Studies (EUROP)
In the College of Arts and Letters

UPPER DIVISION COURSES

EUROP 501. European Life and Culture (3)
Prerequisite: European Studies 301.
Specialized study of topics such as European union, European women, or European art. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.
EUROP 527. The Holocaust in Feature Films (3)
(Same course as History 527)
Two lectures and two hours of activity.
Prerequisite: Upper division or graduate standing.
Depiction of the Nazi policy of destroying European Jewry and its impact on the perpetrators, bystanders, victims, and the post-war world in feature films.
EUROP 596. Topics in European Studies (3)
Prerequisite: European Studies 301 for majors and minors; upper division standing for all others.
Specialized topics in contemporary European culture. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a master’s degree with approval of the graduate adviser.

Hospitality and Tourism Management (HTM)
In the College of Professional Studies and Fine Arts

UPPER DIVISION COURSE

HTM 596. Selected Topics in Hospitality and Tourism Management (1-3)
Prerequisite: Upper division or graduate standing.
Selected topics in hospitality, tourism, and/or tribal gaming management. May be repeated with new content and approval of instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

Humanities (HUM)
In the Department of Classics and Humanities
In the College of Arts and Letters

UPPER DIVISION COURSES

HUM 504. The Early Middle Ages (3)
(Same course as History 504)
Europe and Mediterranean 300-1100 C.E. through various approaches: political, economic, social, and cultural. Collapse of Roman Empire, transformation of classical culture and regions that claimed its heritage: especially the kingdoms of western Europe, but also Byzantine and Arab empires. (Formerly numbered History 404.)
HUM 506. The Renaissance (3)
(Same course as History 506)
Intellectual, artistic, social, and economic transformation in Europe from fourteenth to seventeenth centuries.
HUM 596. Topics in Humanities (1-3)
Prerequisites: Upper division standing and consent of instructor. Interdisciplinary topics in literature and the arts. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. No more than six units of 596 may be applied to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.
HUM 599. Special Study (1-3)
Prerequisites: Consent of major or graduate adviser; to be arranged by department chair and instructor.
Directed individual study. Maximum credit six units.
International Business (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.)