Anthropology
In the College of Arts and Letters

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Faculty
Seth W. Mallios, Ph.D., Professor of Anthropology,
Chair of Department
Elisa J. Sobo, Ph.D., Professor of Anthropology
Matthew T. Lauer, Ph.D., Associate Professor of Anthropology
(Graduate Adviser)
Arion T. Mayes, Ph.D., Associate Professor of Anthropology
Ramona L. Pérez, Ph.D., Associate Professor of Anthropology
Erin P. Riley, Ph.D., Associate Professor of Anthropology
Todd J. Braje, Ph.D., Assistant 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 A1 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;
(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);
(4) Three letters of recommendation from persons in a position to judge your academic ability. Letters may be e-mailed to: matthew.lauer@anthropology.sdsu.edu; m.castane@mail.sdsu.edu; E. Sobo@anthropology.sdsu.edu.
(5) Statement of purpose demonstrating a clear focus of research interests, including both geographical and topical interests. Your statement of purpose is a very important part of the application, as it allows the faculty to look for excellent writing ability, clarity of purpose, realistic assessments of both your skills and the anthropological profession, and an indication that you selected our department for a specific reason. The statement should include the name of at least one SDSU anthropology faculty member who would be a suitable thesis adviser and an explanation why you selected them;
(6) Additional information can be found on the department Web site.

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. Exempt 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 on the old test (prior to August 1, 2011) or 294 on the new test and a minimum of 4.0 on the analytic essay.
Applicants who meet the minimum admission requirements but who do not have a strong background in anthropology may be admitted conditionally. Conditionally admitted students will be required to complete specified courses in addition to the minimum 33 units required for the Master of Arts degree.

**Advancement to Candidacy**

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

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

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

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

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

### General Anthropology Specialization

(SIMS Code: 110940)

1. Anthropology 601, 602, 603, 604 (with no less than a grade of B). Only classified students may enroll in these courses;
2. One of the following methods courses: Anthropology 502, 505, 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, 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.

**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; paleoanthropology. Training in observations, measurements, and analyses.

**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 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 the "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 to explore growth shifts in development of contemporary cultures of Mesoamerica from precontact to today. Countries may include Mexico, Belize, Costa Rica, El Salvador, Guatemala, Nicaragua, and Panama.

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

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

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

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

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

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

GRADUATE COURSES

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

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

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

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

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

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

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 and Design
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
John Gordon, M.F.A., Professor of Art and Design, Director of School
Jo-Anne Berelowitz, Ph.D., Professor of Art and Design
Richard A. Burkett, M.F.A., Professor of Art and Design
Hiroko Johnson, Ph.D., Professor of Art and Design, Emeritus
Suzan C. Merritt, M.F.A., Professor of Art and Design
Arthur L. Ollman, M.F.A., Professor of Art and Design
Iida K. Rigby, Ph.D., Professor of Art and Design, Emeritus
Gail C. Roberts-Fields, M.A., Professor of Art and Design, Emeritus
Helen Z. Shirk, M.F.A., Professor of Art and Design, Emeritus
Tina Marie Yapelii, M.A., Professor of Art and Design
Richard C. Keely, M.F.A., Associate Professor of Art and Design
(Graduate Adviser, Studio Arts)
Sandra Lee Sherman, M.F.A., Associate Professor of Art and Design
Mark J. Siprut, M.F.A., Associate Professor of Art and Design
Kim Stringfellow, M.F.A., Associate Professor of Art and Design
Patricia Cué Couttolenc, M.F.A., Assistant Professor of Art and Design
Matthew G. Hebert, M.F.A., Assistant Professor of Art and Design
Eva Struble, M.F.A., Assistant Professor of Art and Design
Arzu O. Telhan, M.F.A., Assistant Professor of Art and Design

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

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

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

The Art building has expansive facilities offering the student excellent studio space and equipment. In addition, the San Diego Museum of Art, the Museum of Contemporary Art San Diego, 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 and Design 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 and Design
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4805

(1) School of Art and Design application form. Contact the School of Art and Design 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 and Design at SDSU for your pursuit of these goals;

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

(4) Slides, photos or digital images of your work. All slides must be accompanied by a corresponding slide description sheet. All digital images must be accompanied by a printed thumbnail index. Digital images should not exceed 1024 x 768 pixels, and should be presented either as a collection of JPEG files in a folder along with a caption list, or as captioned images contained within a single PDF or with PowerPoint. Printed digital image samples are encouraged, but must be accompanied by disc in the above stated formats;
(5) Two letters of recommendation from art instructors (or others) who are able to comment on your artistic potential in the area of specialization. Letters can be sent separately or included with your application in sealed and signed envelopes;
(6) Any other materials required specifically in the instructions by your choice of discipline;
(7) Return envelope with sufficient postage for the return of your portfolio.

Master of Arts (Art History) Degree in Art

The following materials should be submitted by February 1 for admission for the fall semester to:
Art History Graduate Adviser
School of Art and Design
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4805

(1) School of Art and Design application form. Refer to http://www.sdsu.edu/art to download application form and instructions;
(2) Statement of purpose addressing your professional goals and reasons for selecting the School of Art and Design at SDSU for your pursuit of these goals, what you plan to accomplish at SDSU (in which areas do you plan to specialize), and what your long range career goals are;
(3) A copy (it will not be returned) of your best term paper or seminar report, or reprint of a published article, accompanied by a statement explaining how you came to your topic, your method of research, and the facilities available;
(4) Three letters of recommendation from instructors who can assess your academic performance (you may include one museum reference). Letters can be sent separately or included with your application in sealed and signed envelopes.

Master of Fine Arts Degree in Art

Admission to the Degree Curriculum

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

All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. In general, the student must have completed a bachelor's degree in studio art or the equivalent from an accredited institution, including 12 units of art history, six units of which comprise a survey of the history of Western art. A grade point average of 2.25 or better in upper division art courses is required. Students must also be able to show that they are adequately advanced to carry out projects which measure up to graduate standards. This requirement will be measured by a formal presentation of a portfolio of work to the graduate faculty in the area of emphasis.

Advancement to Candidacy

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

Specific Requirements for the Master of Fine Arts Degree

(Major Code: 10022) (SIMS Code: 660503)

Candidates for the M.F.A., in addition to meeting the requirements for classified graduate standing, must complete a 60-unit graduate program which includes a minimum of 45 units at the 600- and 700-level. Art 694, 760, 791, and 792 are required. Normally, a student will focus on one of the studio art fields (applied design, painting, graphic design, interior design, multimedia, sculpture, and printmaking). With approval of the director and graduate coordinator a student may focus on a program of study combining two studio art fields. Six units must be included in art history, art criticism, and aesthetics courses. Nine units must be included on the program from studio electives outside the area of emphasis or electives in other departments. Art 799A. Thesis must be included on the program. In addition, there will be an oral examination of each candidate by the graduate faculty of the School of Art and Design. 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 and Design. Candidates must be prepared to spend at least two semesters (24 units) in residence as full-time students. Coursework taken as a graduate student to fulfill undergraduate deficiencies may not be used to satisfy any unit requirement for the M.F.A. degree program. A 3.0 grade point average must be maintained at all times. Continuation in the program will be determined by a review of each candidate by the graduate faculty in the emphasis area. This review will be held upon completion of 30 units in the M.F.A. program, or at any time upon request of the graduate coordinator.

Master of Arts Degree in Art

Admission to the Degree Curriculum

Studio Arts

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

All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. In general, students must have completed an undergraduate major in art with a minimum of 24 upper division units, including two semesters of work in the general history of art, before they will be permitted to enter the graduate program. Students must also be able to show that they are adequately advanced to carry out projects which measure up to graduate standards. In studio arts this requirement will be measured by a formal presentation (the Graduate Review) to the emphasis area faculty of a portfolio of examples of the candidate's undergraduate or postbaccalaureate work. The range should be great enough to give the committee a knowledge of the candidate's strengths and weaknesses. A statement of the candidate's objectives in the graduate program should accompany this presentation. If it is determined that the student is capable of doing graduate art work, he/she may be permitted to begin such work even though he/she has not completed an appropriate undergraduate major in art. Those students whose work is insufficiently advanced for classified graduate standing may enroll for courses through Open University, in order to meet the standard requirements. In addition to meeting the requirements for admission to the university, students...
wishing to be admitted to the art history graduate program with a
classified graduate standing must complete the equivalent of the
graduation requirements as specified in the current General Catalog
(a minimum of 39 units of art history to include Art 593).

Students who do not meet the requirements for admission to the
graduate program in art history but meet the requirements for
graduation 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 and
Design, 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
graduation 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 under-
graduate 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 and
Design 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 con-
sultation 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 and
Design's slide library. One copy of art history theses must be given to
the School of Art and Design.

Advanced Certificate in Museum Studies

The School of Art and Design 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 post-
baccalaureate 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 103 and 104.
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 (3)
Prerequisites: Upper division or graduate standing in art and consent of instructor.
Art and design issues relevant to contemporary global society. Sources of inspiration in art and design practice and topical issues examined. 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.
Prerequisites: Six units of Art 423.
Advanced individual design: Exploration of materials, process and function. Continued focus on development of personal design statements and specialized techniques. Maximum credit six units.

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

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

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

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

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

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

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

ART 540. Advanced Photographic Imagery (3)
Six hours.
Prerequisites: Art 440, or Art 340 and 407. All courses must be completed with a grade of C (2.0) or better.
Visual communication and expression using photographic media, including photomechanical and digital processes. Maximum credit six units with consent of instructor.

ART 541. Graphic Design IV (3)
Six hours.
Prerequisites: Grade of C (2.0) or better in Art 339A, 339B, 339C, and two of the following: Art 441, 442, 450, 456. Computer proficiency required with working knowledge of vector graphics, page layout, digital image editing, web design, and motion graphics software consistent with current industry standards. Proof of completion of prerequisites required: Copy of transcript.
Strategy, planning, and problem solving related to visual communication systems with emphasis on social and cultural context.

ART 542. Typography IV (3)
Six hours.
Prerequisites: Grade of C (2.0) or better in Art 339A, 339B, 339C, 442. Computer proficiency required with working knowledge of vector graphics, page layout, digital image editing, web design, and motion graphics software consistent with current industry standards. Proof of completion of prerequisite required: Copy of transcript.
Individual creative and scholarly research in typography, conceptual and contextual exploration, typographic experimentation based on theory, strategy, and problem solving. Maximum credit six units with consent of instructor.
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 344, or 348, or 440, or 448, or 540.  
Advanced design studies in emerging electronic communications, including cyberstudios, Internet and multimedia. Exploration in collaborative, interdisciplinary, and international projects. Maximum credit six units with consent of instructor.  
ART 545. Design Studio (3)  
Six hours.  
Prerequisites: Grade of C (2.0) or better in Art 339A, 339B, 339C, and two of the following: Art 441, 442, 450, 454, 541, and portfolio review. Computer proficiency required with working knowledge of vector graphics, page layout, digital image editing, web design, and motion graphics software consistent with current industry standards. Proof of completion of prerequisites required: Copy of transcript.  
Solutions to design problems for clients in a studio environment including business procedures and production management. Development of a professional level portfolio. Maximum credit six units with consent of instructor.  
ART 546. The Art of the Book III (3)  
Prerequisite: Art 446.  
Design and creation of limited edition artist books made with mixed media and hand printing techniques such as letterpress, intaglio, woodcut, lithography, and photo. Maximum credit six units. Maximum combined credit of 15 units for Art 346, 446, 546.  
ART 547. Environmental Theory (3)  
Prerequisite: Art 247 or 247.  
Survey of alternative solutions to the problem of design of the physical environment.  
ART 552. Interior Design IV (3)  
Six hours.  
Prerequisites: Art 453 and completion of portfolio requirement. Proof of completion of prerequisites required: Copy of transcript.  
Projects in architectural interiors involving the use and perception of enclosed spaces. Space planning systems analysis. Maximum credit six units.  
ART 553. Interior Design V (3)  
Six hours.  
Prerequisite: Art 552. Proof of completion of prerequisite required: Copy of transcript.  
Projects in interiors involving space planning analysis, specification writing, materials selection and furnishing design appropriate to commercial needs. Maximum credit six units.  
ART 557. Nineteenth Century European Art (3)  
Prerequisite: Art 259.  
Development of painting, sculpture, and architecture from the French Revolution to 1900.  
ART 558. Twentieth Century European Art to 1945 (3)  
Prerequisite: Art 259.  
Major developments in the visual arts and art criticism from 1880 to 1945 (Post-Impressionism through Surrealism).  
ART 559. Twentieth Century European and American Art Since 1945 (3)  
Prerequisite: Art 259. Recommended: Art 558.  
Major developments in the visual arts and art criticism since 1945.  
ART 560. History of American Art (3)  
Prerequisite: Art 259.  
Development of painting, sculpture, and architecture from the Native American art and Colonial Period to the present.  
ART 561. Mesoamerican Art: Olmecs to Aztecs (3)  
Prerequisite: Art 259.  
Art and architecture of Mesoamerica from Olmecs to Aztecs. Role of art as transmitter of cultural information and world view. Continuities and ideologies that characterize Mesoamerican civilizations. Field trips required.  
ART 563. Modern Mexican Art (3)  
Prerequisites: Art 258 and 259.  
Mexican art from 1900 to present. Emphasis on images created after Mexican Revolution (1910-1920) in murals, painting, architecture, prints, photography, film, conceptual art. Construction of national identity, debate between national/international currents in art and role of public art. Field trip.  
ART 564. Art of China (3)  
Prerequisite: Art 258 or 259 or 263.  
History of Chinese art from prehistoric times through the Ching Dynasty.  
ART 565. Art of Japan (3)  
Prerequisite: Art 258 or 259 or 263.  
History of Japanese art from prehistoric times to the Meiji Restoration.  
ART 566. History of Japanese Painting Tenth to Twentieth Centuries (3)  
Prerequisite: Art 258 or 259 or 263.  
History of Japanese painting from tenth to twentieth centuries, emphasizing art from three social groups: aristocrats, warriors, and merchants. Analysis of motifs, iconography, and styles of art schools developed during these periods, reinforced by social history.  
ART 568. Art of Crete, Mycenae, Greece, and Rome (3)  
Prerequisite: Art 258.  
Development of painting, sculpture, architecture, and crafts from prehistoric times to the fifth century A.D.  
ART 571A. Modern Art of Latin America (3)  
Prerequisites: Art 258 and 259.  
Historical, political, and social contexts of leading artists and artistic movements in Latin America from late-nineteenth to mid-twentieth century. Field trips required.  
ART 571B. Contemporary Art of Latin America (3)  
Prerequisites: Art 258 and 259.  
Work created by leading contemporary Latin American artists from 1960 to present. Field trips required. (Formerly numbered Art 571.)  
ART 573A. Italian Art of the Fourteenth and Fifteenth Centuries (3)  
Prerequisite: Art 259.  
Italian arts, architecture, artists, and patrons from fourteenth century Proto-Renaissance period through fifteenth century revival of classical humanism in city states of Florence, Siena, Bologna, Mantua, and Padua.  
ART 573B. Italian Art in the Sixteenth Century (3)  
Prerequisite: Art 259.  
High Renaissance in Florence and Rome, followed by disintegration of classical principles and domination of Mannerism in Central and Northern Italy and history of arts of Venice in sixteenth century.  
ART 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: Six units in upper division courses in art.
Fundamental art elements and principles applied to the theories and techniques of gallery exhibition design.

ART 593. History and Methodology of Art History (3)
Prerequisite: Twelve units of upper division art history.
Readings and discussions on the historiography of art and on modern methodologies for art historical research.

ART 596. Advanced Studies in Art and Art History (1-4)
Prerequisites: Twelve units of art and art history and consent of instructor.
Advanced topics in art and art history. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit six units of 596 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES

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

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

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

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

ART 623. Advanced Furniture Design (3)
Six hours.
Prerequisite: Art 523.
Problems in the design and construction of furniture. Projects determined by the individual students in 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 Ceramic and Glaze Technology in Ceramics 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 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 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 691. Curatorial Practice (3)
Six hours.
Prerequisites: Art 578 and 591.
Practical experience in curators' work 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.
Practical experience in curators' work 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 697. Seminar in Curatorial Theory (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 698. Seminar in Museum Administration (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 700. Studio Art Experience (3)
   Six hours.
   Independent research in specified areas, which may require the
   presentation of a paper with its oral defense. Each letter designation
   may be taken for a maximum six units applicable to the M.A. degree;
   nine units applicable to the M.F.A. degree in art.
   A. Studio Art in Painting
   B. Studio Art in Sculpture
   C. Studio Art in Printmaking
   D. Studio Art in Ceramics
   F. Studio Art in Graphic Design
   G. Studio Art in Environmental/Interior Design
   I. Studio Art in Jewelry/Metals
   J. Studio Art in Furniture
   K. Studio Art in Multimedia

ART 716. Individual Research Problems in Sculpture (3)
   Six hours.
   Prerequisite: Art 616 (six units).
   Graduate research problems including independent research in
   sculpture. Projects will be determined by the individual student in
   conference with the instructor. Maximum credit six units applicable to
   the M.A. degree; nine units applicable to the M.F.A. degree in art.

ART 760. Seminar in Twentieth Century Art (3)
   Prerequisite: Art 558 or 559.
   Visual arts and art criticism since 1900.

ART 791. Professional Practice (3) Cr/NC
   Six hours.
   Reading and discussion about subjects of direct concern to the
   professional artist. Open only to classified graduate students in studio
   art. This is an art forum for the practicing artist.

ART 792. Research in Professional Problems (3)
   Reading and discussion pertinent to professional activities in
   specific media. Open only to classified graduate students.

ART 798. Special Study (1-3) Cr/NC/RP
   Prerequisite: Consent of the staff; to be arranged with department
   chair and the instructor.
   Individual study. Maximum credit six units applicable to the M.A.
   degree; nine units applicable to the M.F.A. degree in art.

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

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

OFFICE: Arts and Letters 473
TELEPHONE: 619-594-0931 / FAX: 619-594-0257
http://www.rohan.sdsu.edu/~aps1

Director of Program: Wilburn N. Hansen, Ph.D.

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
Huma Ahmed Ghoash, Ph.D., Professor of Women’s Studies
Lei Guang, Ph.D., Professor of Political Science
Yoshiko Higurashi, Ph.D., Professor of Japanese
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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
Anh N. Hua, Ph.D., Assistant Professor of Women’s Studies

General Information

No new students are being admitted to this program. For further information, contact the Center for Asian and Pacific Studies.

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

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

Admission to Graduate Study

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

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

Graduate Admissions

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

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

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

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

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

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

Center for Asian and Pacific Studies

The following materials should be mailed or delivered to:

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

(1) Letters of reference (minimum 3);

(2) Personal statement;

(3) Writing sample of recent academic work.

Advancement to Candidacy

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

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

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Four of this bulletin, the student must complete a minimum of 30 units from courses acceptable on master’s degree programs, including Asian Studies 799A. The remaining 27 units to be selected, with departmental approval, from the list of approved courses in Part Five of this bulletin. In addition, any other Asian-content courses may be applied with approval of the graduate adviser.

The total program may not include more than 15 units in 500-level courses.

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

All programs will be approved by the graduate committee of Center for Asian and Pacific Studies.

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

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

UPPER DIVISION COURSES

ASIAN 596. Selected Studies in Asian Cultures (3)
Topics on various aspects of Asian studies. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

Anthropology Course (ANTH)

ANTH 582. Regional Anthropology (3)*

Comparative Literature Course (CLT)

CLT 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)*

GRADUATE COURSES

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 Course (ECON)

ECON 750. Seminar in History of Economic Thought (3)*

Finance Course (FIN)

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

Geography Courses (GEOG)

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

GEOG 740. Seminar in Human Geography (3)*

History Courses (HIST)

HIST 601. Seminar in Historical Methods (3)

HIST 650. Directed Readings in Asian History (3)

Linguistics Course (LING)

LING 795. Seminar in Linguistics (3)*

Management Course (MGMT)

MGMT 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.
Faculty
Allen W. Shafter, Ph.D., Professor of Astronomy, Chair of Department
Eric L. Sandquist, Ph.D., Professor of Astronomy
William F. Welsh, 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)
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 associateships 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.

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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.

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

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

(1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;
Note:
• Students who attended SDSU need only submit transcripts for work completed since last attendance.

(2) 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).

A main research interest in the department is the study of the structure and evolution of stars derived from the investigation of eclipsing and interacting binary stars. These studies make use of both photometry and spectroscopy at the observatory. Stellar evolution is further studied with photometry of star clusters. The stellar content of nearby galaxies is probed through observations of novae and low-mass x-ray binaries contained within these systems. Galaxies are investigated through surface photometry using direct imaging. The department also has a strong CCD instrumentation program. Graduate students are extensively involved in many of these research programs. Students make use of observatory facilities in support of their thesis research.

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

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

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

Graduate Admissions
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San Diego, CA 92182-7416

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

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

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

Specific Requirements for the Master of Science Degree

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

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

1. Complete the nine-unit core course curriculum (Astronomy 630, 660, 680).
2. Complete at least 18 additional units of 500-, 600-, 700-level in astronomy graduate level courses or approved 500-level courses in astronomy or related fields as approved by departmental graduate adviser; not to exceed 15 units of 500-level courses if pursuing Plan B.
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 510. Exoplanets (3)
Prerequisites: Astronomy 350 and 440, or Physics 350 and 354 with minimum grade of B-, and consent of instructor.
Extrasolar planet detection; mass and radius determination; transits and eclipses; orbital dynamics and transit timing variations; internal and atmospheric characteristics; the exoplanet population and formation scenarios.

ASTR 596. Advanced Topics in Astronomy (2-3)
Prerequisite: Consent of instructor.
Selected topics in astronomy or astrophysics. May be repeated with new content upon approval of instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

ASTR 610. Binary Stars (3)
Prerequisite: Astronomy 450.
Visual, spectroscopic, and eclipsing binary stars. Review of observational techniques. Methods of orbital analysis with applications emphasizing determination of fundamental stellar properties, such as mass, radius, temperature, and luminosity. Implications for stellar evolution.

ASTR 620. Galactic Structure (3)
Prerequisite: Astronomy 450.
Survey of basic observational data for determining structure of Milky Way Galaxy. Includes luminosity functions, stellar distributions, solar motion, stellar populations, kinematics and dynamics of general and peculiar stellar motions.

ASTR 630. Stellar Atmospheres and Interniors (3)
Prerequisites: Astronomy 440 and Mathematics 342A.
Gas thermodynamics and equations of state. Production of stellar continuum radiation and spectral lines. Theories of radiative and convective energy transport. Interior structure and evolution of stars.

ASTR 640. Accretion Power and Radiation Processes (3)
Prerequisites: Astronomy 450 and Mathematics 342A.
Accretion processes in astrophysics; compact objects, spherical and disc accretion, interacting binary stars and active galactic nuclei. High energy radiation processes: bremsstrahlung, Compton and inverse Compton scattering and synchrotron emission.

ASTR 660. Galaxies and Cosmology (3)
Prerequisite: Astronomy 450.
Morphology, photometric, and spectroscopic properties, dynamics, and evolution of normal galaxies. Current interpretations of peculiar galaxies and QSO’s. The extragalactic distance scale. Observational cosmology.

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

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

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

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

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

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

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

OFFICE: Speech, Language, and Hearing 221
TELEPHONE: 619-594-7746 / FAX: 619-594-7109
http://chhs.sdsu.edu/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
Jacqueline J. Georgeson, Au.D., Audiology Clinic Director

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

Doctoral Program

General Information
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 licensed and ASHA certified audiologist. Graduates of this program will have the knowledge base, research exposure, and advanced clinical skills to enter the workforce in any setting, and will be prepared to function as independent audiology professionals in the expanding health care arena. The program encompasses academic, clinic, and research experiences in audiology and otology through the combined resources from the School of Speech, Language, and Hearing Sciences at SDSU and the Division of Surgery (Otolaryngology) in the School of Medicine at UCSD. An Au.D. provides the essential education, technical training, research, and creative experience necessary for professional activity, college-level teaching, and preceptoring.

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

Applicants must submit transcripts of all post-secondary coursework, three letters of recommendation from former or current professors, supervisors, or other appropriate persons able to judge their academic potential, and an applicant essay (statement of purpose) indicating their interests and strengths relative to their career objectives. Details of these requirements are available on the school’s Web site. Assuming that students meet the requirements for admission outlined above, each student admitted to the program will have a program adviser 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 instructions and deadlines for applying. For additional information, write directly to the Au.D. Program Directors, School of Speech, Language, and Hearing Sciences, 5000 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). Applicants must complete two online applications (CSU Mentor Application and the program’s application) by the deadline posted on the SDSU Au.D. Web site (http://shls.sdsu.edu) to be considered for the program beginning in the following fall semester. International students should submit materials at least two weeks earlier than other applicants.

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. Students must also electronically submit the program’s online application by the posted deadline. 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.
School of Speech, Language, and Hearing Sciences

The following supplemental materials should be mailed or delivered (must be received by the date posted on the program’s Web site) 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) A hard copy of the program’s online application that was electronically submitted;
(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

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

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

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

Course Requirements. The program for each student will consist of 14 core courses, half of which are to be taken at each campus, and 14 elective courses, with a minimum of four to be taken at each campus. The student’s faculty adviser must approve all courses.

A student who earns less than a 3.0 grade point average in academic and/or clinical 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 maintain an average grade of B or higher to pass clinic courses. Students are assessed across the following clinical skill categories: 1) professionalism; 2) patient interaction; 3) evaluation; 4) treatment; 5) documentation. Prior to the fourth year externship, each student will complete approximately 700 hours of clinic experience.

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

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

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

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 and elective 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. 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. Students must have an average grade of B or higher in academic and clinic coursework to qualify for the second year externship.
Examination. The Second Year Qualifying Examination may be repeated once following additional directed study by the student's adviser. Students must pass the Second Year Examination in order to enroll in third year courses.

(3) Comprehensive Examination: At the end of the third year, and after Advancement to Candidacy (see below), the student will take a written Comprehensive Examination.

Advancement to Candidacy. Candidates will be recommended for Advancement to Candidacy after successfully completing all course 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 Qualifying Examinations, 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 will consist of a research-based investigation. Each student will select a Doctoral Project Committee comprised of two Au.D. program faculty (one from each campus) and at least one additional tenured faculty member from either campus external to the program. The chair of the committee can be from either campus. The Executive Committee will approve each student’s Doctoral Project Committee. All doctoral projects will be written in a format approved by the student’s Doctoral Project Committee. The student’s final written document will be approved by the student’s Doctoral Project Committee and presented in a forum open to all faculty and students. 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 experience necessary to perform basic audiologic assessment, including otoscopy, pure-tone, masking, speech, and immittance measures, testing and patient counseling, hands-on experiences with different tests and equipment.

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

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

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

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

AUD 721. Clinical Case Studies and Staffings I (1)
Prerequisite: Concurrent registration in Audiology 701.
Presentations and discussion of clinical cases and issues relative to clinical practice. Students’ clinical experiences are discussed relative to medical and audiological assessment and management.

AUD 725. Pediatric Audiology (3)
Prerequisites: Audiology 700 and 705.
Development of normal and abnormal auditory behavior, behavioral and physiological testing of infants and children, hearing screening for pre-and school-age children, educational audiology, auditory processing disorders, counseling of patient and family, and assistive listening devices.

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

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

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 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
Andrew J. Bohonak, Ph.D., Professor of Biology
Willa Fields, D.N.Sc., Professor of Nursing
Robert A. Gottlieb, M.D., Professor of Biology
Scott Kelley, Ph.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
Usa Sinha, Ph.D., Professor of Physics
William G. Tong, Ph.D., Distinguished Professor of Chemistry and Biochemistry
Barbara Ann Bailey, Ph.D., Associate Professor of Statistics
B. Mikael Bergdahl, Ph.D., Associate Professor of Chemistry and Biochemistry
Kelly S. Doran, Ph.D., Associate Professor of Biology
Robert A. Edwards, Ph.D., Associate Professor of Computer Science
Sunil Kumar, Ph.D., Associate Professor of Electrical and Computer Engineering
Chi-Dean Lin, Ph.D., Associate Professor of Statistics
John J. Love, Ph.D., Associate Professor of Chemistry and Biochemistry
Elizabeth R. Waters, Ph.D., Associate Professor of Biology
Robert W. Zeller, Ph.D., Associate Professor of Biology
Elizabeth A. Dinsdale, Ph.D., Associate Professor of Biology
Kristin A. Duncan, Ph.D., Assistant Professor of Statistics
Pamela Moses, Ph.D., Assistant Professor of Psychology

Adjunct Faculty

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

Genomics Institute of the Novartis Research Foundation:
Andrew I. Su, Ph.D., Computational Discovery

La Jolla Institute for Allergy and Immunology:
Bjoern Peters, Ph.D., Center for Infectious Disease
Anjano Rao, Ph.D., Signaling and Gene Expression Research

VA Hospital:
Alan Calvitti, Ph.D., System Biology

West Wireless Health Institute:
Hassan Ghazemzadeh, Ph.D., Research Engineering Group

General Information

Bioinformatics and Medical Informatics (BIOMI) are multidisciplinary fields at the intersection of computing and informatics, mathematics and statistics, biology, chemistry, and engineering. The explosion in genomic information and in the elucidation of pathways of various types has created an unprecedented, but largely unmet, need for professionals with a working knowledge of the biological sciences and computing/statistical methods. The shortage, which is especially severe in the biotechnology and pharmaceutical industries, has been documented by various studies and discussed in the press. We can also observe a comparable demand in hospital and other clinical settings as the impact of new technologies spreads into clinical research and medical practice.

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

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

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

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

Admission to Graduate Study

In addition to the general requirements for admission to the university with classified graduate standing, as described in Part Two of the Graduate Bulletin, a student must satisfy the following requirements before being considered for recommendation to enter the masters program.

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

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

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

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

Students who do not meet all of the above requirements for admission with classified graduate standing may be admitted with conditionally classified graduate standing upon the recommendation of the research program. Students so admitted will be advised as to
the nature of their deficiency and the time to be allowed to achieve full classified graduate standing. Conditions may include satisfactory passing of certain undergraduate courses. These courses will be in addition to the minimum of 33-38 units required for the program.

**Graduate Admissions**

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

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

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

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

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

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

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

The following materials should be mailed or delivered to:

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

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

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

**Advancement to Candidacy**

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

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

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

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

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

2. Complementary: Nine units in a field complementary to the student’s background with approval of the graduate coordinator selected from the following courses.
   - CHEM 567 Biochemistry Laboratory (3)
   - CS 514 Database Theory and Implementation (3)
   - CS 520 Advanced Programming Languages (3)
   - CS 535 Object-Oriented Programming and Design (3)
   - CS 605 or Scientific Computing (3)
   - STAT 551A Probability and Mathematical Statistics (3)
   - STAT 551B Probability and Mathematical Statistics (3)

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

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

**Professional Science Master Concentration**

(Major Code: 07994) (SIMS Code: 771489)

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

2. Complementary: Twelve units in a field complementary to the student’s background with approval of the graduate coordinator selected from the following courses.
   - CHEM 567 Biochemistry Laboratory (3)
   - CS 514 Database Theory and Implementation (3)
   - CS 520 Advanced Programming Languages (3)
   - CS 535 Object-Oriented Programming and Design (3)
   - CS 605 or Scientific Computing (3)
   - COMP 605
   - STAT 551A Probability and Mathematical Statistics (3)
   - STAT 551B Probability and Mathematical Statistics (3)

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

4. Five units of research including Thesis:
   - BIOMI 797 Research (2) Cr/NC/RP
   - BIOMI 798 Special Study (2) Cr/NC/RP
   - BIOMI 799A Thesis or Project 799 (3) Cr/NC/RP

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

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

**UPPER DIVISION COURSES**

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.
BIOMI 596. Special Topics in Bioinformatics and Medical Informatics (1-4)
Prerequisite: Consent of instructor.
Advanced selected topics in bioinformatics and medical informatics. 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 applicable to a master’s degree with approval of the graduate adviser.

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.
Biology

In the College of Sciences

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

Faculty
Anca Mara Segall, Ph.D., Professor of Biology, Chair of Department
(Graduate Adviser, Microbiology)
Andrew J. Bohonak, Ph.D., Associate Professor of Biology,
Vice Chair of Department
Todd W. Anderson, Ph.D., Professor of Biology
(Graduate Adviser, Ecology)
Sanford I. Bernstein, Ph.D., Distinguished Professor of Biology
Annalisa Berta, Ph.D., Professor of Biology
(Graduate Adviser, Evolutionary Biology Ph.D. Program)
Richard L. Bizzocco, 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. Glembocki, Ph.D., Professor of Biology
Robert A. Gottlieb, M.D., Professor of Biology
Greg L. Harris, Ph.D., Professor of Biology
(Graduate Adviser, Biology Ph.D. program)
Marshall C. Hedin, Ph.D., Professor of Biology
Scott T. Kelley, Ph.D., Professor of Biology
David Lipson, Ph.D., Professor of Biology
Stanley R. Maloy, Ph.D., Professor of Biology and
Dean of the College of Sciences
Leroy R. McClennenah, Jr., Ph.D., Professor of Biology
Kathleen L. McGuire, Ph.D., Professor of Biology
Walter C. Oechel, Ph.D., Distinguished Professor of Biology
(Graduate Adviser, Ecology Ph.D. program)
Jacques Perrault, Ph.D., Professor of Biology
Robert S. Pozos, Ph.D., Professor of Biology
Todd W. Reeder, Ph.D., Professor of Biology
Forest Rohwer, Ph.D., Professor of Biology
Michael G. Simpson, Ph.D., Professor of Biology
Mark A. Sussman, Ph.D., Distinguished Professor of Biology
Kelly Doran, Ph.D., Associate Professor of Biology
Matthew S. Edwards, Ph.D., Associate Professor of Biology
Ralph Feuer, Ph.D., Associate Professor of Biology
Brian T. Hentschel, Ph.D., Associate Professor of Biology
Kevin A. Hovel, Ph.D., Associate Professor of Biology
Chun-Ta Lai, Ph.D., Associate Professor of Biology
Rebecca Lewison, Ph.D., Associate Professor of Biology
Elizabeth R. Waters, Ph.D., Associate Professor of Biology
Kathy S. Williams, Ph.D., Associate Professor of Biology
Roland Wolkonwicz, 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
Jeremy Long, Ph.D., Assistant Professor of Biology
Ricardo Zayas, Ph.D., Assistant Professor of Biology

Associateships and Assistantships
Graduate teaching associateships and graduate assistantships in
biology are available to a limited number of qualified students.
Application and additional information may be secured from the
graduate coordinator in biology.

General Information
The Department of Biology offers graduate study leading to the
degrees of Master of Arts and Master of Science in biology and the
Master of Science degree in microbiology. In addition, the Department
of Biology offers three doctoral programs leading to the Ph.D. in
biology (cell and molecular) with the University of California, San
Diego, in ecology with the graduate group in ecology at the University
of California, Davis, and in evolutionary biology with the University of
California, Riverside. These academic programs can prepare
students for careers in research, education, and public service.
Modern life science buildings provide facilities for graduate study in
the biological sciences. Additional facilities available in the community
include the San Diego Zoo hospital, the United States Department of
Agriculture, Fish and Game Commission, the Hubbs-Sea World
Research Institute, the San Diego Natural History Museum, and the
Naval Undersea Center. San Diego State University also operates the
Coastal and Marine Institute Laboratory on San Diego Bay and the
SDSU Field Stations program with research sites in the Chihuahua
Valley, Fortuna Mountain, and Temecula (Riverside County).

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

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

(1) Official transcripts (in sealed envelopes) from all
postsecondary institutions attended;
Note:
• Students who attended SDSU need only submit 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).

Master of Arts Degree in Biology
Master of Science Degree in Biology
Master of Science Degree in Microbiology

The following materials should be mailed or delivered to:
Department of Biology
Graduate Coordinator
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4614

(1) Biology department application;
(2) Application for teaching associateship position or graduate
assistantship (optional);
(3) At least three letters of recommendation in sealed and signed
envelopes (optional form available online or may be obtained
from department). Forms are available at
Ph.D. Degree in Biology (Cell and Molecular)
The following materials should be mailed or delivered to:

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

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

Ph.D. Degree in Ecology
The following materials should be mailed or delivered to:

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

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

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

Ph.D. Degree in Evolutionary Biology
The following materials should be mailed or delivered to:

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

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

Section I.
Master’s Degree Programs

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

Admission to the Degree Curriculum

In addition to the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin, a student must satisfy the following requirements before he/she will be considered for recommendation to enter the masters program.

1. Meet the requirements deemed equivalent to a baccalaureate degree in biology or microbiology at San Diego State University.
2. Have a grade point average of 2.85 or better on work taken for the baccalaureate degree.
3. Have a grade point average of 3.0 or better in upper division courses (at least 24 units) acceptable for the major.
5. Be considered as capable of graduate work in the biological sciences by at least two letters of reference submitted to the biology graduate coordinator.
6. Be accepted by a research program and be sponsored by a faculty member of the area (required only for programs in ecology and evolutionary biology).

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

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

Biology

Advancement to Candidacy

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

Specific Requirements for the Master of Arts
Degree in Biology

(Major Code: 04011) (SIMS Code: 771402)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the student must complete a graduate program of 30 units of upper division and graduate courses selected, with the approval of the graduate coordinator, from the biological sciences as listed below, or from closely related fields. At least 15 of the units selected must be in 600- and 700-numbered courses, including Biology 799A, Thesis. A maximum of six units of the required 30 units may be selected from acceptable courses offered in the College of Education. A reading knowledge of scientific French, German, Russian, or Spanish, and a final oral examination in the field of the thesis and its implications in the broad fields of biology are also required.

Specific Requirements for the Master of Science
Degree in Biology

(Major Code: 04011) (SIMS Code: 771401)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the student must complete a graduate program of 30 units of upper division and graduate courses selected, with the approval of the graduate coordinator, from the biological sciences as listed below, or from closely related fields. At least 15 of the units selected must be in 600- and 700-numbered courses, including Biology 799A, Thesis. A maximum of six units of the required 30 units may be selected from acceptable courses offered in the College of Education. A final oral examination in the field of the thesis and its implication in the broad fields of biology is also required.
**Master's Degree Research Programs**

**Ecology** (Major Code: 04201) (SIMS Code: M.A. 771416; M.S. 771417): The overall program emphasizes quantitative approaches to ecological research and the framing of problems within the general context of ecological theory. Faculty and student research currently falls into the areas of limnology, marine ecology, plant community ecology and primary productivity, physiological plant ecology, marine aquaculture and fisheries ecology, animal population ecology and energetics, ecological genetics, ecosystems management, and systems ecology. Program adviser, Anderson.

**Evolutionary Biology** (Major Code: 04071) (SIMS Code: M.A. 771458; M.S. 771488): This research program is broadly concerned with the biology and evolution of whole organisms. The student has a wide variety of research areas from which to choose, including morphology, systematics, paleontology, natural history, behavior, comparative physiology, developmental biology, population genetics, coevolution, and evolutionary theory. Many groups of organisms are studied, including marine and terrestrial invertebrates, vertebrates, and plants. Program adviser, Burns.

In addition to the emphases described above, a number of faculty have active research programs in marine biology and accept graduate students in this area.

**Microbiology** (Major Code: 04111) (SIMS Code: M.S. 771451): A separate graduate degree is offered in microbiology. Program adviser, Segall.

**Molecular Biology** (Major Code: 04161) (SIMS Code: M.A. 771459; M.S. 771465): The program area is concerned with biology at the molecular level, with particular emphases on the correlation of structure and function of macromolecules, catalysis and control, molecular genetics, regulation of gene expression, and the molecular basis of cellular architecture, cell movement, bioenergetics and membrane function (administered through Molecular Biology Institute). Program adviser, Burns.

**Physiology** (Major Code: 04101) (SIMS Code: M.A. 771466; M.S. 771465): Research opportunities are offered by faculty in the cell and molecular biology, ecology, and evolutionary biology program areas. Subareas of interest include cardiovascular, cellular, molecular, physiological plant ecology, and comparative physiology. Requirements for this program vary depending on the program area of the faculty adviser and prospective applicants are encouraged to contact potential faculty advisers or the program adviser before applying. Program adviser, Harris.

**Microbiology Advancement to Candidacy**

All students must satisfy the general requirements for advancement to candidacy, as stated in Part Four of this bulletin. Satisfactory progress on the thesis research will be prerequisite to obtaining departmental approval for advancement.

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

(Major Code: 04111) (SIMS Code: 771451)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the student must complete a graduate program of 30 units of upper division and graduate courses selected, with the approval of the graduate adviser, from the biological sciences and closely related fields. All students entering the Master of Science program in microbiology will be required to take an advanced course in the molecular biology of microbes. Not less than 18 units must be selected from courses in the area of microbiology. Among the 600- and 700-numbered courses selected, the student’s program must include Biology 799A, Thesis. A maximum of six units of the required 30 units may be selected from acceptable courses offered in other related areas, including the College of Education and the Graduate School of Public Health.

A final oral examination on the field of the thesis and its implication in the broad fields of microbiology is required.

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**Section II. Doctoral Programs**

**Biology (Cell and Molecular)**

(Major Code: 04011) (SIMS Code: 771402)

http://www.bio.sdsu.edu/cmob/propsinfo.html

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

**Biological structures**: T. Frey, T. Huxford, J. Love.
**Cardiovascular molecular biology**: C. Glombotski, R. Gottlieb, M. Sussman.
**Cell and molecular immunology**: K. McGuire, C. Tsoukas, P. van der Geer.
**Gene expression**: G. Harris, W. Stumpf, R. Zeller.
**DNA recombination and chromosome structure**: A. Segall.
**Microbial molecular ecology**: E. Dinsdale, R. Edwards (Computer Science), F. Rohwer.
**Molecular biology of viruses and bacteriophage**: R. Feuer, J. Perrault, F. Rohwer, R. Wolkowicz.
**Molecular evolution**: S. Kelley, E. Waters.
**Molecular microbiology**: K. Doran, D. Lipson, S. Maloy.
**Neurobiology**: R. Zayas.
**Substructure and function in motile cells**: S. Bernstein, R. Bizzozo.

**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 2012-13, 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 assistant.

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 (Computer Science), Frey, Giombotski, Gottlieb, Harris, Huxford (Chemistry and Biochemistry), Kelley, Lipson, Love (Chemistry and Biochemistry), Maloy, McGuire, Paolini, Perrault, Rohwer, Segall, Stumpf (Chemistry and Biochemistry), Sussman, Tsoukas, van der Geer (Chemistry and Biochemistry), Waters, Walkowicz, Zeller, Zayas.

University of California, San Diego:

Graduate Adviser: J. Pogliano
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 dunes, 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.
**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 ecology. Preparation should include a strong background in biology, physics, chemistry, and mathematics. Applicants must have a bachelor's degree from an accredited college or university. Acceptance of a student into the joint program by each institution depends on meeting the standards of admission of the respective institutions and by available facilities for research and instruction.

**Residency Requirements**

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

**Advising Committee**

Upon admission to the program, the doctoral graduate advisers of the two institutions will establish an advising committee for the student. This committee will consist of three faculty members chosen jointly from the two cooperating institutions. In consultation with the student, the committee will develop the student's course of study and will establish the student's joint qualifying committee. At least one member of the advising committee must be from SDSU and one from UCD.

**Course Requirements**

Upon arrival at SDSU the advising committee works with the student to develop a course of study, which involves coursework at both SDSU and UCD and core requirements at SDSU (Biology 645 and 745), UCD (three quarters of Ecology 296, two to three Ecology 290) seminars. Prior to taking the qualifying examination, students complete the course of study, including the three quarters at UCD, and develop a firm understanding of ecological principles and research methods.

There is a five-year limit for completion of the Ph.D. in Ecology following advancement to candidacy.

**Qualifying Examinations**

**Qualifying Committee**

A five-member committee, composed of appropriate numbers of faculty members from each of the cooperating institutions, will be recommended by the advising committee for each student and approved by the Graduate Deans from each institution. The student's dissertation adviser cannot be a member of the qualifying committee.

The qualifying committee will conduct an oral comprehensive qualifying examination, which will evaluate the student's understanding of modern biological principles. The examination will focus on principles of ecology, research methods, and three areas related to the major research interest of the student. The purpose of this examination is to permit the student to demonstrate competence not only in the major research field but also in related areas of ecology.

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

**Joint Dissertation Committee**

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

**Dissertation**

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

**Award of the Degree**

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

**Financial Support**

The Department of Biology at SDSU endeavors to provide adequate support for all students so that full time can be devoted to research, training, and study. Support includes tuition, a stipend, and funds for research supplies. All students are required to obtain teaching experience, which is normally accomplished by appointment as a graduate teaching associate.

**Faculty**

**Graduate Advisers:**

San Diego State University: W. Oechel  
University of California, Davis: Sharon Lawlor  
SDSU Faculty: Anderson, Bohonak, Clark, Dinsdale, Deutschman, Edwards, Hentschel, Hovel, Lai, Lewison, Lipson, Long, McClanahan, Oechel, Reeder, 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 adviser and an additional, programmatically appropriate, member. From UCR, the committee members will be drawn from faculty within the EEOG graduate program. In consultation with the student, the Guidance Committee plans the student's program through Advancement to Candidacy.
Course Requirements

The Guidance Committee works with the student to develop an individualized course of study and identify potential deficiencies. Students in the joint doctoral program will have similar requirements as students in UCR's EEOB graduate program. Specifically, the joint doctoral students will take the Theory of Evolution (UCR BIOL 216) and at least two disciplinary courses (see below; the two required disciplinary courses must cover different disciplines; at least one disciplinary course must be taken at UCR). In addition, the students will enroll in a current research topics seminar course during each UCR quarter or SDSU semester of residence. The majority of required course work should be completed prior to the Written Qualifying Examination, which is taken at the end of the second year. All required disciplinary courses (see below) must be completed before taking the Oral Qualifying Examination. An example of the required coursework and anticipated schedule for completion is presented below:

**Year One at SDSU**

Each semester:
- **BIOL 795** Seminar in Ecology and Evolutionary Biology (3) Cr/NC
- At least one of the following courses:
  - **BIOL 624** Population Genetics (3)
  - **BIOL 740** Phylogenetic Systematics (3)

**Year Two at UCR**

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

Qualifying Examinations

**Qualifying Committee**

By the end of the second year, students are expected to have taken a written qualifying examination. The written examination is evaluated by an ad hoc committee of faculty participating in the 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: Berta, Bohonak, Burns, Clark, Hedin, Kelley, Rohwer, Reeder, Simpson, Waters, Zayas, Zeller.

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

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

**UPPER DIVISION COURSES**

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

**BIOL 508. Coevolution (3)**

Prerequisites: Biology 352 and 354.
Coevolution in interspecific interactions, like herbivory, predation, parasitism, competition, pollination, and mimicry.

**BIOL 509. Evolutionary Biology (3)**

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

**BIOL 510. Molecular Evolution (3)**

Prerequisites: Biology 352 and 366 or graduate standing.
Molecular evolution including concepts of homology and convergence, the nearly neutral theory of evolution, evolution of new protein function, detecting selection, multi-gene family evolution and evolutionary genomics.

**BIOL 511. Evolution of Development (3)**

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

**BIOL 512. Evolution and Ecology of Marine Mammals (3)**

Two lectures and three hours of laboratory.
Prerequisites: Biology 352 and 354.
Biology of marine mammals including pinniped, cetacean and sirenian evolution, diet and foraging strategies, social organization, reproductive strategies, echiolocation, diving physiology, and conservation.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites and Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 514</td>
<td>Biology of the Algae</td>
<td>4</td>
<td>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.</td>
</tr>
<tr>
<td>BIOL 515</td>
<td>Marine Invertebrate Biology</td>
<td>4</td>
<td>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.</td>
</tr>
<tr>
<td>BIOL 517</td>
<td>Marine Ecology</td>
<td>4</td>
<td>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.</td>
</tr>
<tr>
<td>BIOL 518</td>
<td>Biology of Fishes</td>
<td>4</td>
<td>Three lectures and three hours of laboratory. Prerequisite: Biology 354. Ecology, anatomy, physiology, evolution, taxonomy, environmental constraints, habitats, feeding, behavior, growth, reproduction, biotic interactions, population dynamics, and assemblage structure. Fisheries biology concepts to include stock-recruitment models, density dependence and population regulation, management of fisheries, and conservation. Not open to students with credit in Biology 520 and 541.</td>
</tr>
<tr>
<td>BIOL 523</td>
<td>Herpetology</td>
<td>4</td>
<td>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.</td>
</tr>
<tr>
<td>BIOL 524</td>
<td>Ornithology</td>
<td>4</td>
<td>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.</td>
</tr>
<tr>
<td>BIOL 525</td>
<td>Mammalogy</td>
<td>4</td>
<td>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.</td>
</tr>
<tr>
<td>BIOL 526</td>
<td>Terrestrial Arthropod Biology</td>
<td>4</td>
<td>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.</td>
</tr>
<tr>
<td>BIOL 527</td>
<td>Animal Behavior</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>BIOL 527L</td>
<td>Animal Behavior Laboratory</td>
<td>1</td>
<td>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.</td>
</tr>
<tr>
<td>BIOL 528</td>
<td>Microbial Ecology</td>
<td>3</td>
<td>Two lectures and three hours of laboratory. Prerequisites: Biology 203, 203L, 204, 204L. Recommended: Biology 350 and 354. Roles of microorganisms in soil, aquatic and marine ecosystems, microbial adaptations to the environment, and interactions within microbial communities and between microbes and multicellular organisms. Laboratory techniques to isolate and study microbes.</td>
</tr>
<tr>
<td>BIOL 530</td>
<td>Plant Systematics</td>
<td>4</td>
<td>Two lectures and six hours of laboratory, field trips. 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.</td>
</tr>
<tr>
<td>BIOL 535</td>
<td>Plant Ecology</td>
<td>4</td>
<td>Three lectures and three hours of laboratory. Prerequisites: Biology 203, 203L, 204, 204L. Strongly recommended: Biology 354. Plant adaptation and response to living and non-living environment including aspects of plant evolution, demography, ecophysiology community and ecosystem dynamics and soil-plant relationships. Terrestrial systems emphasized.</td>
</tr>
<tr>
<td>BIOL 538</td>
<td>Environmental Policy and Regulations</td>
<td>3</td>
<td>(Same course as Environmental Science 538) Prerequisite: Biology 354. History of biological conservation and environmental laws; regulations governing biological resources; role of biologists; environmental impact analysis, operation of regulatory and resource agencies; biologists as expert witnesses; wetland protection and mitigation, state heritage programs, role of nongovernmental agencies.</td>
</tr>
<tr>
<td>BIOL 540</td>
<td>Conservation Ecology</td>
<td>3</td>
<td>Two lectures and three hours of laboratory. Prerequisite: Biology 354. Human impacts on ecosystems, the resultant endangerment and extinction of plant and animal species, and strategies for the protection and recovery of threatened forms.</td>
</tr>
<tr>
<td>BIOL 542</td>
<td>Chemical Ecology</td>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>BIOL 544</td>
<td>Terrestrial Ecosystems and Climate Change</td>
<td>3</td>
<td>(Same course as Environmental Science 544) 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.</td>
</tr>
</tbody>
</table>
BIOL 544L. Global Change Science Laboratory (2)
(Same course as Environmental Science 544L)
Six hours of laboratory.
Prerequisite: Biology 254.
Ecological methods in ecosystem and climate change science to include chemical analysis (of stable isotopes and elements) and meteorological measurements. Modeling, data interpretation, and presentations.

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

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

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

BIOL 555. Principles of Electron Microscopy (2)
Prerequisites: Biology 204, 204L and Physics 180B.
Principles of scanning and transmission electron microscopy including theoretical and practical aspects 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 562. Ecological Metagenomics (3)
Two lectures and three hours of laboratory.
Prerequisites: Credit or concurrent registration in Biology 354 and 366.
Next generation DNA sequencing technology with emphasis on ecological applications in microbial communities. Metagenomic analysis of taxonomic identification, physiological function, and the ecological role of the microbial community in the broader ecosystem.

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 and 366L. Recommended: Biology 350. Intermediate laboratory approaches to biochemistry, cellular biology, and molecular biology at a level appropriate for both advanced undergraduate and graduate students.

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

BIOL 570. Neurobiology (3)
Prerequisite: Biology 366 or 590 or Psychology 360 for psychology majors.
Structure and function of the nervous system to include cellular and molecular mechanisms underlying neuronal excitability and synaptic function, nervous system development, cellular and systems analysis of sensory, motor and higher brain functions. Emphasis on experimental approaches.

BIOL 575. Molecular Basis of Heart Disease (3)
Prerequisite: Biology 366 or 590.
Current literature on the molecular basis of disordered physiology leading to heart disease.

BIOL 576. Developmental Biology (3)
Prerequisite: Biology 366. Strongly recommended: Biology 567.
Fundamental processes of development from fertilized egg to organism. Emphasis on cellular and molecular mechanisms common to development of metazoan organisms.

BIOL 584. Medical Microbiology (3)
Prerequisites: Biology 350 and 366.
Major bacterial and viral pathogens; molecular mechanisms of pathogenesis, microbial toxins and antimicrobial agents; immune response to microbial infections; biochemical and molecular diagnostics.

BIOL 585. Cellular and Molecular Immunology (3)
Prerequisite: Biology 366. Recommended: Credit or concurrent registration in Biology 567 and 567L.
Cellular and molecular aspects of the immune response. Genetics of immunoglobulins, major histocompatibility complex, lymphocyte development and their manifestations on immune responsiveness, lymphokines, immunopathologies including AIDS, and contemporary immunological techniques. Not open to students with credit in Biology 485.

BIOL 588. General Parasitology (3)
Two lectures and three hours of laboratory.
Prerequisites: Biology 203, 203L, 204, 204L. Strongly recommended: Completion of six upper division units in the major.

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.
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 majors 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.

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 biology, 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 725. Clinical Anatomy I (4)
(Same course as Doctor of Physical Therapy 725)
Three lectures and three hours of laboratory.
Prerequisite: Admission to the DPT program.
Applied anatomy of upper and lower extremities of the human body; joint anatomy and mechanics, anatomical structures to produce articular movement to include muscles, arterial, peripheral nervous systems, and articular and extremity movement patterns.

BIOL 726. Clinical Anatomy II (4)
(Same course as Doctor of Physical Therapy 726)
Three lectures and three hours of laboratory.
Prerequisite: Biology/Doctor of Physical Therapy 725.
Axial portion of the human body; biomechanics of the spinal column to include head and neck, thorax, related viscera, and abdomino-pelvic region.

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

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

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

BIOL 751. Seminar in Ecological and Evolutionary Biology (1-3) 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 757. Research (1-3) Cr/NC/RP
Research in one of the fields of biology. Maximum credit six units of 797 and 798 applicable to a master’s degree.

BIOL 759. 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 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 779. 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 master’s degree.

BIOL 798A. Thesis or Project (3) Cr/NC/RP
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master’s degree.

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

DOCTORAL COURSES

BIOL 897. Doctoral Research (1-15) Cr/NC/RP
Prerequisite: Admission to the doctoral program.
Independent investigation in the general field of the dissertation.

BIOL 899. Doctoral Dissertation (1-15) Cr/NC/RP
Prerequisites: An officially constituted dissertation committee and advancement to candidacy.
Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the student plans to graduate.
Molecular Biology

Faculty

Greg L. Harris, Ph.D., Professor of Biology
(Molecular Biology Institute Director)
Sanford I. Bernstein, Ph.D., Distinguished Professor of Biology
Richard L. Bizzozzo, Ph.D., Professor of Biology
Christopher C. Giambotski, Ph.D., Professor of Biology
Robert A. Gottlieb, M.D., Professor of Biology
Scott T. Kelley, Ph.D., Professor of Biology
Stanley R. Maloy, Ph.D., Professor of Biology and Dean of the College of Sciences
Shelli R. McAlpine, Ph.D., Professor of Chemistry and Biochemistry
Kathleen L. McGuire, Ph.D., Professor of Biology
Jacques Perrault, Ph.D., Professor of Biology
Forest Rohwer, Ph.D., Professor of Biology
Anca Mara Segall, Ph.D., Professor of Biology, Chair of Department
Mark A. Sussman, Ph.D., Distinguished Professor of Biology
Constantine Tsoukas, Ph.D., Professor of Biology
Kelly Doran, Ph.D., Associate Professor of Biology (Graduate Adviser)
Ralph Feuer, Ph.D., Associate Professor of Biology
Tom Huxford, Ph.D., Associate Professor of Chemistry and Biochemistry
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
Roland Wolkowicz, Ph.D., Associate Professor of Biology
Robert W. Zeller, Ph.D., Associate Professor of Biology
Ricardo Zayas, Ph.D., Assistant Professor of Biology

Adjunct Faculty
Salvatore Albani, M.D., Sanford Burnham Medical Research Institute
Piero Pilaris, M.D., Harvard Medical School
Jeremy Barr, Ph.D., San Diego State University
Michael Buchmeier, Ph.D., University of California, Irvine
Alex Burgin, Ph.D., Emerald Biostuctures
Anthony Cammarato Ph.D., Johns Hopkins University
Maurizio Capogrossi, M.D., Istituto Dermoپpatico dell’Immacolata (IDI - IRCCS)
Wenda Chou, Ph.D., San Diego State University
Joseph Cleary, Ph.D. National Renewable Energy Laboratory
Karen Clingerman, D.V.M., The Scripps Research Institute
Thomas Cupec, Ph.D., Eili Lilly
Adrienne Dubin, Ph.D., The Scripps Research Institute
Kim Finley, Ph.D., SDSU Donald P. Shiley BioScience Center
Ally Forsyth, Ph.D., San Diego State University
David Giegel, Ph.D., SDSU Donald P. Shiley BioScience Center
Natalie Gude, Ph.D., San Diego State University
Deron Herr, Ph.D., National University of Singapore
Valentine Lance, Ph.D., San Diego State University
Lousie Laurent, Ph.D., University of California, San Diego
The Scripps Research Institute
Phyllis-Jean Linton, Ph.D., SDSU Donald P. Shiley BioScience Center
Patrick McDonough, Ph.D., Vala Sciences, Inc.
Aram Megighian, Ph.D., University of Padova
Girish Melkani, Ph.D., San Diego State University
Robert Mentzer, Ph.D., SDSU Donald P. Shiley BioScience Center
John Mokili, Ph.D., San Diego State University
Brett Monia, Ph.D., Isis Pharmaceuticals, Inc.
Ulrich Mueller, Ph.D., The Scripps Research Institute
James Neel, Ph.D., San Diego State University
Kent Osborn, Ph.D., San Diego State University
Joy Phillips, Ph.D., SDSU Donald P. Shiley BioScience Center
Clemencia Pinilla, Ph.D., Torrey Pines Research Institute
Harry Plymale, D.V.M., San Diego State University
Joseph Pogliano, Ph.D., University of California, San Diego
Coralie Poizat, Ph.D., King Faisal Specialist Hospital & Research Centre in Riyadh
Moseilo Schaechter, Ph.D., San Diego State University
University of California, San Diego
Marlyn Thoman, Ph.D., SDSU Donald P. Shiley BioScience Center
John Trawick, Ph.D., Genomtica
Elizabeth Virts, Ph.D., SDSU Donald P. Shiley BioScience Center
Mirko Volkers, M.D., San Diego State University
Katrine Whiteson, Ph.D., San Diego State University
Gregor Zlokarnik, Ph.D., Vertex Pharmaceuticals

General Information

The Molecular Biology Institute (MBI) administers the Master of Arts and Master of Science degrees in biology with a concentration in molecular biology. The MBI is currently composed of members from the Departments of Biology, Chemistry and Biochemistry, and the Graduate School of Public Health, and is designed to serve these departments in the coordination, support, and enhancement of research and training in the molecular biological sciences. See Biology in this section of the bulletin for information on how to apply.

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

Admission to Graduate Study

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

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

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

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

Advancement to Candidacy

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

(Major Code: 04161) (SIMS Code: M.A. 771459; M.S. 771458)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete a graduate program of 30 units of 500-level and above courses selected, with the approval of the MBI graduate adviser. A list of suggested courses is presented on the following page. All students entering the Master of Science program in molecular biology will be required to take an advanced course in molecular biology. At least 15 units of the courses selected must be in 600- and 700-numbered courses including 799A. Thesis. The student must complete at least three units of Molecular Biology 601 and six units of Molecular Biology 610. With the approval of the graduate adviser of molecular biology, a student may substitute for Molecular Biology 610 another 600- or 700-numbered course. A final oral examination on the thesis will be administered by the thesis committee.

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

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

UPPER DIVISION COURSES

**Biology (BIOL)**

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

**Chemistry (CHEM)**

- CHEM 510. Advanced Physical Chemistry (3)
- CHEM 550. Instrumental Methods of Chemical Analysis (2)
- CHEM 550. General Biochemistry (3)
- CHEM 552. Intermediary Metabolism (2)
- CHEM 553. Nucleic Acid Function and Protein Synthesis (2)
- CHEM 554. Receptor Biochemistry and Protein Modification (2)
- CHEM 556. Biochemistry Laboratory (3)
- CHEM 556. Advanced Special Topics in Chemistry (1-3)

**GRADUATE COURSES**

**Biology (BIOL)**

- BIOL 600. Seminar (2-3)
- BIOL 696. Advanced Topics in Biology (1-3)
- BIOL 797. Research (1-3) Cr/NC/RP
- BIOL 798. Special Study (1-3) Cr/NC/RP

**Chemistry (CHEM)**

- CHEM 712. Chemical Kinetics (3)
- CHEM 751. Separations Science (3)
- CHEM 763. Cellular Regulation (2)
- CHEM 790. Seminar (1-3)
- CHEM 791. Research Seminar (1)
- CHEM 792. Bibliography (1)
- CHEM 797. Research (1-3) Cr/NC/RP
- CHEM 798. Special Study (1-3) Cr/NC/RP

**GRADUATE COURSES**

**M BIO 600. Seminar in Molecular Biology (1-3)**

Prerequisite: Consent of instructor.

Evaluation of current literature in molecular biology. May be repeated with new content. Maximum credit six units applicable to a master’s degree.

**M BIO 601. Colloquium in Molecular Biology Research (1) Cr/NC/RP**

Recent research advances in selected areas of modern molecular biology presented by faculty of the Molecular Biology Institute and established outside investigators. May be repeated with new content. Open only to students admitted to the molecular biology program or by permission of the graduate adviser for molecular biology. Maximum credit six units, three of which are applicable to a master’s degree.

**M BIO 610. Advanced Topics in Molecular and Cell Biology (1-4)**

Prerequisite: Graduate standing in a life or physical science.

Intensive study in specific areas of molecular and cell biology. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.
Biomedical Quality Systems

In the Center for Bio/Pharmaceutical and Biodevice Development and the College of Sciences

OFFICE: Geology/Mathematics/Computer Science 629
TELEPHONE: 619-594-0138 / FAX: 619-594-6381
E-MAIL: cbbd@sciences.sdsu.edu
http://www.cbbd.sdsu.edu/

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

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)
   - R A 778 Quality Control and Quality Assurance: Pharmaceuticals, Biologics, and Medical Devices (3)
   - B A 651 Organizational Behavior (3)
   - B A 662 Operations and Supply Chain Management (3)
   - MIS 705 Communication Strategies (3)

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

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

Advanced Certificate in Biomedical Quality Systems

(Offered through the College of Extended Studies)

The Advanced Certificate in Biomedical Quality Systems includes 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. 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. Courses in the Advanced Certificate in Biomedical Quality Systems may be applied to the Master of Science degree in Regulatory Affairs as electives.

The program adviser is Dr. Catherine J. Atkins, Graduate Adviser and Associate Dean in the College of Sciences. For more information see http://www.cbbd.sdsu.edu/. To enroll in this certificate program, call 619-594-6030.

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

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

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

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

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

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Biostatistics and Biometry

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

Faculty Committee for Biostatistics and Biometry
Douglas H. Deutschman, Ph.D., Professor of Biology
Juanjuan Fan, Ph.D., Professor of Statistics
Richard A. Levine, Ph.D., Professor of Statistics
Kung-Jong Lui, Ph.D., Professor of Statistics
John E. Alcaraz, Ph.D., Associate Professor of Public Health
Barbara Ann Bailey, Ph.D., Associate Professor of Statistics
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: Douglas H. Deutschman, Ph.D., 619-594-5391)
BIOL 597A. Univariate Statistical Methods in Biology (3)

Public Health Courses (P H)
(Adviser: Ming Ji, Ph.D., 619-594-3454)
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: Kung-Jong Lui, Ph.D., 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 670A-670B. Advanced Mathematical Statistics (3-3)
STAT 672. Nonparametric Statistics (3)
STAT 676. Bayesian Statistics (3)
STAT 677. Design of Experiments (3)
STAT 678. Survival Analysis (3)
STAT 679. Analysis of Discrete Data (3)
STAT 680A-680B. Advanced Biostatistical Methods (3-3)
Business Administration

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

OFFICE: Education and Business Administration 448
TELEPHONE: 619-594-8073 / FAX: 619-594-1863
E-MAIL: gradbus@mail.sdsu.edu
http://www.sdsu.edu/business

Associateships
Graduate teaching associateships and graduate nonteaching associateships in business administration are available to a limited number of qualified students. The graduate degree may also prepare students for a teaching career. Applications and additional information may be secured from the departmental offices of the College of Business Administration.

General Information
The College of Business Administration offers graduate study leading to the Master of Business Administration degree, Master of Science degree in Business Administration and the Master of Science degree in Accounting. The college also offers a joint program with the College of Arts and Letters leading to both a Master of Business Administration and a Master of Arts in Latin American Studies. The College of Business Administration M.B.A. and M.S. programs are accredited by AACSB International—The Association to Advance Collegiate Schools of Business.

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

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

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

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

Admission to Graduate Study
Admission to the college's graduate programs is competitive. A number of factors are taken into consideration in the admission decision, and only the top applicants are accepted. These factors include the applicant's previous academic performance, the quality of the previous universities attended, the field of undergraduate study, scores on the Graduate Management Admissions Test (GMAT), management experience, and the written application essay. With approval of the Director of Graduate Business Programs, scores from the Graduate Record Examination General Test (GRE) may be submitted in lieu of GMAT scores. References which validate the written application essay. All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Graduate Programs Office in the College of Business Administration.

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

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

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

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

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

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

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

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

The following materials should be mailed or delivered to:

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

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

Master of Business Administration Degree for Executives

The following materials should be mailed or delivered to:

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

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

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

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Specific Requirements for the Master of Business Administration Degree
(Major Code: 05011) (SIMS Code: 221702)

The student must complete an approved program of study including a maximum of 48 units and a minimum of 30 units of graduate coursework. Up to six units of 500-level courses may be included in the program and at least nine units of program courses must be completed after advancement to candidacy. Up to 12 units of coursework may be accepted for transfer credit for programs of study consisting of 33 or more units. Up to nine units of coursework may be accepted for transfer credit for programs of study consisting of 30 units. Transfer credit will be accepted for graduate coursework completed at an accredited AACSB institution or with the approval of the director of graduate programs.

Students entering the program should have completed coursework in basic statistics and macro- and micro-economics. They should be proficient in college-level mathematics including algebra and in the use of personal computers including spreadsheets and word processing.

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 Regulation and Corporate Governance in Accounting (3)
   - FIN 604 Legal Environment for Executives (3)
   - MGT 722 Seminar in Business Ethics and Social Institutions (3)
   - MGT 746 Seminar in Corporate Governance (3)
   - MIS 755 Information Systems Security Management (3)

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

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

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

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

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

   **Specializations**

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**Business Administration**

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

**Master of Business Administration for Executives**

(Offered only through the College of Extended Studies)

**Admission to the Degree Curriculum**

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

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

(Major Code: 05011)

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

Students accepted for the M.B.A. for Executives concentration are fully matriculated in the university and meet all university requirements as established by the Graduate Council.

All courses are scheduled in a modular fashion on alternate Fridays and Saturdays over a 24-month period for the convenience of working executives. 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, where applicable, the 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 the Global Environment (3)
B A 701 Executive Entrepreneurship (3)
B A 702 Social Responsibility: Legal and Ethical Environment of Business (3)
B A 703 Strategic Management (3)
B A 705 Marketing Strategy (2)
B A 707 Executive Seminar in Negotiations (2)
B A 709 Seminar in the Global Financial Environment (3)
B A 710 Executive Leadership (3)
B A 711 Seminar in Contemporary Challenges (5)
B A 790 Directed Readings in Business Administration (3) Cr/NC

Master of Science Degree in Business Administration
(Major Code: 05011) (SIMS Code: 221701)

Admission to the Degree Curriculum

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

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

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

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

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

Advancement to Candidacy

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

Students concurrently enrolled in deficiency coursework may be given permission to take the comprehensive examination in their concentration prior to actual completion of all coursework. However, comprehensive examinations will not be evaluated and results will not be reported to the Division of Graduate Affairs until all deficiency coursework has been successfully completed. This may delay graduation.

Specific Requirements for the Master of Science Degree

In addition to meeting the requirements for classified graduate standing as described above and the general requirements for master’s degrees as described in Part Four of this bulletin, the student must complete a graduate program of at least 30 approved units to include at least 21 units in 600- and 700-numbered courses (except for the concentration in Financial and Tax Planning which requires at least 18 units in 600- and 700-numbered courses). Up to nine units of coursework may be accepted as transfer credit. This program cannot include Finance 604; Management Information Systems 609; and Business Administration courses numbered 650-665, without specific permission of the director, Graduate Business Programs. At least 24 units must be in business administration and economics. Not more than a total of six units in courses 797 (Research), 798 (Special Study), and Business Administration 780 (Field Studies in Business), may be accepted for credit toward the degree.

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

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.

Concentration in Financial and Tax Planning
(Major Code: 05043) (SIMS Code: 222124)

For the concentration in financial and tax planning, an optional Plan B, Comprehensive Examination, is available. 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 201 Statistical Methods (3) OR
- 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)

Concentrations

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No new students are being admitted into the following concentrations on the SDSU campus.
Master of Business Administration Degree and Juris Doctor Degree  
(California Western School of Law)  
(Major Code: 05995) (SIMS Code: 221720)

General Information

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

Admission to the Degree Curriculum

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

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

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

Specific Requirements for the MBA/JD Concurrent Degree

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

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

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

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

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

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

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

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

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 (More information about electives can be found at http://rohan.sdsu.edu/~cba/grad/jdmba.html)

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

Year 1  California Western School of Law only
Year 2  San Diego State University College of Business Administration only
Year 3  Both schools
Year 4  Both schools

Master of Business Administration Degree and Juris Doctor Degree  
(Thomas Jefferson School of Law)

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

General Information

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

Admission to the Degree Curriculum

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

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

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

Specific Requirements for the MBA/JD Concurrent Degree

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

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

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

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

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

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 (3)
Electives: 14 units

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

Year 1 Thomas Jefferson School of Law only
Year 2 San Diego State University College of Business Administration only
Year 3 Both schools
Year 4 Both schools

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

General Information

The College of Business Administration and the Center for Latin American Studies offer a three-year concurrent program study leading to a Master of Business Administration and a Master of Arts in Latin American Studies. The primary objective of the concurrent program is to offer preparation in the fields of business administration and Latin American studies for the purpose of providing the knowledge and skills necessary to promote and engage in business relationships within a Latin American historical, cultural, and linguistic milieu, in Latin America or in the United States.

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.

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 faculty advisory committee; 4) have a thesis proposal approved by the combined faculty advisory committee.

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

Specific Requirements for the MBA/MA Degree

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

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

1. The college expects students entering the Master of Business Administration/MA in Latin American Studies program to be proficient in several areas. These include proficiency in 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 Regulation and Corporate Governance in Accounting (3)
   - FIN 604 Legal Environment for Executives (3)
   - MGT 722 Seminar in Business Ethics and Social Institutions (3)
   - MGT 746 Seminar in Corporate Governance (3)
   - MIS 755 Information Systems Security Management (3)

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

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

5. Complete 24 units in courses of Latin American content, including the following required courses:
   - LATAM 600 Seminar in Latin American Studies (3)
   - LATAM 601 Seminar on Methodology of Latin American Studies (3)
   - The remaining 18 units selected from the following list of courses:
     - LATAM 550 Mexican-US Border from a Latin American Perspective (3)
     - LATAM 580 Special Topics* (3)
     - LATAM 696 Experimental Topics* (3)
     - LATAM 795 Latin American Studies Internship (3) Cr/NC
     - LATAM 797 Research (3) Cr/NC/RP

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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 to candidacy; 3) have a thesis proposal approved by a business 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.

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.
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 662. Operations and Supply Chain Management (3)**
Prerequisite: Classified graduate standing.
Managerial concepts and quantitative methods associated with the design, execution, and management of operations and supply chain systems.

**B A 665. Financial Management I (3)**
Prerequisites: Business Administration 650 and 652.
Role of finance in firm; financial planning and control, management of working capital, time value of money, valuation, risk analysis, basic capital budgeting, long-term financing, international aspects of financial decisions.

**B A 780. Field Studies in Business (1-3) Cr/NC**
Prerequisite: Completion of MBA core.
Application of business concepts to real world organizations. Students work under supervision of a faculty member to perform a project utilizing theories and principles from previous business coursework. Maximum credit six units.

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

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

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

B A 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program coursework.
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 the College of Extended Studies)
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 the College of Extended Studies)
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 the College of Extended Studies)
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 the College of Extended Studies)
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 the College of Extended Studies)
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 the College of Extended Studies)
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 the College of Extended Studies)
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 the College of Extended Studies)
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 the College of Extended Studies)

B A 702. Social Responsibility: Legal and Ethical Environment of Business (3) (Offered only in the College of Extended Studies)
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 the College of Extended Studies)
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 the College of Extended Studies)
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 the College of Extended Studies)
Prerequisite: Admission to M.B.A. for Executives program.

B A 709. Seminar in the Global Financial Environment (3) (Offered only in the College of Extended Studies)
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 the College of Extended Studies)
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 the College of Extended Studies)
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 the College of Extended Studies)
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

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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. C. Janie Chang, recognized for research and teaching was awarded the chair in fall 2006.

Master of Science Degree in Accountancy

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

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

- B A 650 Financial Reporting and Analysis I (3)
- B A 651 Organizational Behavior (3)
- B A 653 Managerial Economics (3)
  (or ECON 101 and ECON102)
- B A 665 Financial Management I (3)
- STAT 119 Elementary Statistics for Business (3)

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 Measurement and Reporting; Accountancy 621, Accounting Information Systems; Accountancy 624, Taxation for Managers; Accountancy 625, Managerial Analysis and Financial Reporting; 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. If required, up to three of these courses (nine units) may be accepted toward the 30 approved units for the graduate program.

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

- Accounting Information Systems
- Financial Reporting
- Taxation

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

BS/MS 4+1 Degree Program (BMACC)

The BS/MS 4+1 degree program (BMACC) is for students who plan to pursue professional accounting careers in public accounting firms, corporations, and not-for-profit and government organizations. Students must successfully complete 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, and a minimum SDSU GPA of 3.0, and a minimum upper division SDSU College of Business Administration GPA of 3.0. Students may apply for the program at several different points in their academic career: (1) after completing Accountancy 321 with a minimum grade of 3.0, (2) after completing Accountancy 321 and 322 with a minimum average GPA of 3.0 in these courses, or (3) after completing Accountancy 321, 322, 421 with a minimum average GPA of 3.0 in these courses.

Students attain graduate status when they have earned at least 120 units toward the completion of the BMACC program. No more than nine units may be in 500-level courses to meet the requirements of the master’s program. At least 15 units of 500-, 600-, and 700-numbered courses must be in accounting (to include Accountancy 522 and 790) and must include at least 12 units in courses numbered 650 and above in special cases, nine units with adviser approval. Students must achieve at least a 3.0 average in the courses numbered 500 and above and specified on their official program for the 30 unit master’s degree. Courses numbered 500 and above must be completed within seven years of the first course completed on the master’s degree program. If for any reason a student does not satisfactorily complete the requirements for the Master of Science in Accounting degree, they will be awarded the B.S. degree in Business Administration in Accounting, upon completion of the requirements for the B.S. degree.

Courses Acceptable on Master’s Degree Program in Accountancy (ACCTG)

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

UPPER DIVISION COURSES

ACCTG 501. Advanced Financial Accounting (3)
Prerequisites: Minimum grade of C in Accountancy 322; credit or concurrent registration in Accountancy 421. Proof of completion of prerequisites required: Copy of transcript.

Advanced financial accounting topics. Partnerships, consolidations, foreign currency transactions and financial statements, accounting for derivatives and hedging, accounting for bankruptcy and reorganizations.

ACCTG 503. Federal Taxation of Individuals (3)
Prerequisites: Accountancy 201 and 202. Approved upper division business major, business minor, or other approved major. Proof of completion of prerequisites required: Copy of transcript.

Taxation of individuals, including income, deductions, credits, social security taxes, and property transactions.

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

ACCTG 508. Accounting for Not-For-Profit Organizations (3)
Prerequisite: Minimum grade of C in Accountancy 322. Proof of completion of prerequisite required: Copy of transcript.

Principles of modified accrual accounting in state and local governmental units, hospitals, colleges, and universities. Budgetary accounting, appropriations, encumbrances, internal controls, and auditing procedures.

ACCTG 522. International Financial Reporting (3)
Prerequisites: Minimum grade of C in Accountancy 322 (or Accountancy 620 and 625). Proof of completion of prerequisites required: Copy of transcript.

International financial reporting issues and standards.

ACCTG 596. Contemporary Topics in Accounting (1-3)
Prerequisites: Business major approved by the College of Business Administration and consent of instructor.

Contemporary topics in modern accounting. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

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

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

ACCTG 624. Tax for Managers (3)
Prerequisite: Business Administration 650.
Federal income tax law that affects management decisions in a framework of ethical tax planning and risk assessment.

ACCTG 625. Managerial Analysis and Financial Reporting (3)
Prerequisite: Business Administration 650.
Measurement concepts and mechanics to translate business transactions into management and financial reporting information. Cost control and budgeting, inventory, operational assets, leases, deferred taxes, and strategic analysis.

ACCTG 626. Auditing and Assurance Services (3)
Prerequisites: Accountancy 620 and 621.
Duties, responsibilities, and ethics of the auditor; auditor’s reports and procedures for evaluation of financial statements. Compilation and review standards for assurance services provided to non-public companies.

ACCTG 650. Tax Research and Practice (3)
Prerequisite: Accountancy 322, 503, or 624.
Tax research methodology; statutory, administrative, and judicial sources of tax law. Tax practitioner regulations, responsibilities, and ethics to include IRS Circular 230, AICPA Code of Conduct and Statements on Standards for Tax Services. Tax administration, sanctions, agreements, and disclosures.
ACCTG 651. Seminar in Corporate Tax (3)  
Prerequisite: Credit or concurrent registration in Accountancy 650.  
Corporate tax problems involving distributions, liquidations, reorganizations, redemptions, personal holding companies, accumulated earnings tax, and thin capitalization.

ACCTG 654. Seminar in Partnership Taxation (3)  
Prerequisite: Credit or concurrent registration in Accountancy 650.  
Partnership and S corporation tax laws related to formation, operations, distributions, and liquidations. Flow-through entities in small and medium sized business environments.

ACCTG 655. Tax Planning for Individuals (3)  
Prerequisite: Credit or concurrent registration in Accountancy 650.  
Selected complex tax laws related to individuals and sole proprietorship businesses, sales and exchanges of property, tax deferred transactions in property, accounting periods and methods, and personal deductions.

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

ACCTG 657. Accounting for Income Taxes (3)  
Prerequisite: Undergraduate degree in accounting or Accountancy 620 and 624.  
Financial accounting for income taxes. Accounting methods and periods for Federal income tax purposes.

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

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

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

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

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

ACCTG 673. Accounting Information Systems (AIS) Development (3)  
Prerequisite: Accountancy 621.  
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. (Formerly numbered Accountancy 575.)

ACCTG 675. Seminar in Accounting Information Systems Audit and Control (3)  
Prerequisite: Accountancy 673 or Management Information Systems 687 with a grade of B or better.  
Risk assessment and management in accounting systems, including impact on clients' business and audit functions, external and internal auditor issues, internal controls in computerized environments, issues related to Sarbanes-Oxley Act, and application of computer-assisted audit techniques (CAATs) using current audit software.

ACCTG 680. Seminar in Managerial Accounting (3)  
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 Regulation and Corporate Governance in Accounting (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 729. Current Issues in Accounting and Auditing (3)  
Prerequisite: Accountancy 620.  
Contemporary theories and practices in relation to changing accounting environment. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

ACCTG 790. Case Studies in Accounting Practice (3)  
Prerequisite: Advancement to candidacy.  
Problem diagnosis, information analysis and evaluation, and decision making for contemporary issues in accounting information systems, auditing, financial reporting, management accounting, and taxation using case studies. Preparation for comprehensive examination for students in the M.S. degree in Accountancy under Plan B.

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.
Finance
In the College of Business Administration

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Faculty

Mehdi Salehizadeh, Ph.D., Professor of Finance,
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Andrew Q. Do, Ph.D., Professor of Finance
(Graduate Adviser, Real Estate)
David P. Ely, Ph.D., Professor of Finance
Kamal M. Haddad, Ph.D., Professor of Finance
(Graduate Adviser)
Moon H. Song, Ph.D., Professor of Finance
(Graduate Adviser)
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Stefano Gubellini, Ph.D., Assistant Professor of Finance
Januj A. Juneja, Ph.D., Assistant Professor of Finance
Ning Tang, Ph.D., Assistant Professor of Finance

Executive Financial Planner Advanced Certificate
(Offered through the College of Extended Studies)
(Certificate Code: 90057) (SIMS Code: 226602)

The advanced certificate is intended for students who wish to provide advanced financial planning advice to individuals, families and partners. The program is intended for experienced financial, legal, or accounting professionals who enroll in the Executive Financial Planner Advanced Certificate Program. Offered jointly by the College of Business Administration and the College of Extended Studies, this advanced certificate is registered with the Certified Financial Planner Board of Standards, Inc., as a program intended to provide advanced financial planning knowledge and skills, behavioral finance, client psychology, practices to current and/or real financial data. Financial planning software. Counseling and communication skills, behavioral finance, client psychology, practices standards, discipline and ethics. Students may register once at the undergraduate level and may repeat with new content at the graduate level.

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 courses in order to earn the certificate. Classes with a grade below a “C” (2.0) may not be included. Students admitted to a master’s program may use certificate credit toward a graduate degree in business (Master of Business Administration or Master of Science in Business Administration) with the permission of their graduate adviser.

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

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

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

UPPER DIVISION COURSES

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

FIN 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. (Formerly numbered Finance 485.)

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, practices 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 783. Seminar in Real Estate Investment and Development (3)
Prerequisite: Graduate standing.
Analysis of real estate investment and development decisions by corporations, individuals and financial institutions. Market and feasibility analysis, taxation, financing and risk evaluation, portfolio considerations.
FIN 784. Seminar in Real Estate Finance and Valuation (3)
Prerequisite: Graduate standing.
Application of valuation theory to real property and related mortgage instruments in a market context. Market definition, data collection and analysis. Value determinants and new valuation technologies. Special valuation and financing issues and cases.
FIN 797. Research (3) Cr/NC/RP
Prerequisite: Advancement to candidacy. Research in the area of finance. Maximum credit six units applicable to a master’s degree.
FIN 798. Special Study (1-3) Cr/NC/RP
Prerequisite: Consent of staff; to be arranged with department chair and instructor.
Individual study. Maximum credit six units applicable to a master’s degree.
Management
In the College of Business Administration

OFFICE: Student Services East 3356

Faculty
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Alex F. De Noble, Ph.D., Professor of Management
Lori V. Ryan, Ph.D., Professor of Management
Gangaram Singh, Ph.D., Professor of Management and
Interim Dean of the College of Business Administration
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(Graduate Adviser)
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Lawrence C. Rhyne, Ph.D., Associate Professor of Management
(Graduate Adviser)
Congcong Zheng, Ph.D., Associate Professor of Management
(Graduate Adviser)

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

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

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

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

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

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

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

MGT 701. Seminar in World Business Environment (3)

MGT 721. Seminar in Group Processes and Leadership (3)
Prerequisite: Business Administration 651. Perceptions and processes in work groups. Experience in interpersonal networks, influence and rewards, stereotypes; managing differences and conflicts.

MGT 722. Seminar in Business Ethics and Social Institutions (3)
Prerequisite: Business Administration 651. Ethical and social aspects of current issues in business and society. Changing role of stakeholders including consumers, shareholders, and employees. Assessment of operation, functioning and regulation of the market system.

MGT 723. Seminar in International Strategic Management (3)
Prerequisite: Completion of MBA core or MS prerequisites. Strategic decision making in managing international enterprises. General management problems in directing and controlling transnational companies, including entry, acquisitions and joint ventures. Cases and readings to acquaint students with worldwide business practices.

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

MGT 729. Seminar in Organizational Issues (3)
Prerequisite: Classified graduate standing. 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. Principles and techniques for managing the growing firm. Focus on managing issues confronting entrepreneurs beyond start-up of a new venture. Focus on issues from both entrepreneur and investor perspectives.

MGT 745. Seminar in Corporate Innovation and Entrepreneurship (3)
Prerequisite: MBA core. Challenges and issues confronting organizations seeking to pursue new business opportunities. Senior management charged with the mandate of pursuing new business opportunities and employees desiring to champion new ventures under corporate umbrella.

MGT 746. Seminar in Corporate Governance (3)
Prerequisite: Classified graduate standing. Roles and interrelationships among members of corporate governance triad: managers, directors, and shareholders. History and theories of corporate governance, ethical obligations underlying the three roles, and case studies.
MGT 747. Seminar in Managing Technology Commercialization (3)
Prerequisite: Graduate standing.
Assessment of future commercialization potential of early stage technologies. Technology commercialization process including technology and market assessments, business models, revenue streams, licensing, and protection of intellectual property.

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

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

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

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

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

In the College of Business Administration

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

Faculty
Robert Plice, Ph.D., Associate Professor of Management Information Systems, Chair of Department
James R. Beatty, Ph.D., Professor of Management Information Systems
Alexis Koster, Ph.D., Professor of Management Information Systems (Graduate Adviser)
John M. Penrose, Ph.D., Professor of Management Information Systems
Fardinnoon Raafat, Ph.D., Professor of Management Information Systems (Graduate Adviser)
Bruce A. Reing, Ph.D., Professor of Management Information Systems
Bongsik Shin, Ph.D., Professor of Management Information Systems (Graduate Adviser)
Yeongling Heilo 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
Murray Jennex, Ph.D., Associate Professor of Management Information Systems

Robert Plice, Ph.D., Associate Professor of Management Information Systems, Chair of Department
James R. Beatty, Ph.D., Professor of Management Information Systems
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Bruce A. Reing, Ph.D., Professor of Management Information Systems
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Yeongling Heilo 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
Murray Jennex, 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)
- BA 650 Financial Reporting and Analysis I (3)
- BA 655 Marketing (3)
- BA 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) (SIMS Code: 222335)
In addition to meeting the requirements for classified graduate standing as described above and the general requirements for master's degrees as described in Part Four of this bulletin, the student must complete a graduate program of at least 36 approved units including at least 27 units in 600- and 700-numbered courses. Up to nine units of coursework may be accepted as transfer credit. Not more than a total of three units in courses Business Administration 799A, Thesis, and Management Information Systems 798, Special Study, may be accepted for credit toward the degree. With approval of the graduate adviser, a substitute course may be allowed in place of a required course after reviewing student credentials.

Required core courses:
- IS Technology (15 units)
  - MIS 686 Database Management Systems (3)
  - MIS 687 Data Communications and Distributed Data Processing (3)
  - MIS 695 Information Systems Development I (3)
  - MIS 697 Information Systems Development II (3)
  - MIS 752 Seminar in Supply Chain Planning and Control (3)
- IS Management (12 units)
  - MIS 688 Information Systems in Organizations (3)
  - MIS 750 Project Management (3)
  - MIS 755 Information Systems Security Management (3)
  - MIS 790 Directed Readings in Management Information Systems (3) Cr/NC
- OR
  - BA 799A Thesis (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 section of this bulletin for explanation of the course numbering system, unit or credit hour, prerequisites, and related information.

UPPER DIVISION COURSES

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

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

GRADUATE COURSES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

MIS 749. Business Analytics (3)
Prerequisite: Business Administration 652.
Business analytics techniques for predictive modeling and customer segmentation. Applications include churn management, business experiments, cluster segmentation, and market basket analysis. (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.

DOCTORAL COURSES

MIS 896. Doctoral Research Practicum (1-9) Cr/NC/RP
Prerequisite: Admission to doctoral program.
Independent investigation in general area of field of dissertation. Conducted in practical settings under faculty supervision. Maximum credit 36 units.

MIS 897. Doctoral Research Practicum (1-9) Cr/NC/RP
Prerequisite: Admission to doctoral program.
Independent investigation in general field of information systems. Maximum credit 36 units.

MIS 898. Doctoral Research Practicum (1-9) Cr/NC/RP
Prerequisite: Admission to doctoral program.
Individual study leading to study and research required for doctoral dissertation.

MIS 899. Doctoral Research Practicum (1-9) Cr/NC/RP
Prerequisite: Admission to doctoral program.
Preparation for the dissertation for the doctoral degree. Enrollment is required during the term in which the student plans to graduate.

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 East 3356
TELEPHONE: 619-594-5317 / FAX: 619-594-3272

Faculty
George E. Belch, Ph.D., Professor of Marketing,
Chair of Department
Kathleen A. Krentler, D.B.A., Professor of Marketing
(MBA Graduate Adviser)
Claudiu V. Dimofte, Ph.D., Assistant Professor of Marketing
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
chair and instructor. (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 appli-
cation 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 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 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. Advanced Marketing Strategy (3)
Prerequisites: Business Administration 655 and admittance to candidacy.
Preparation for the comprehensive examination for those students
in the MSBA program under Plan B.
MKTG 779. Advanced Marketing Strategy (3)
Prerequisites: Business Administration 655.
Planning, managing, and evaluating brand strategies. Theories,
models, concepts, and techniques used to build, measure, and
analyze brand equity Marketing decisions faced by an organization
in managing brands for long-term profitability.
MKTG 780. Directed Readings in Marketing (3) Cr/NC/RP
Prerequisite: Advancement to candidacy.
Research in the area of marketing. Maximum credit six units applica-
table to a master’s degree.
MKTG 797. 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.
In the Department of Chemistry and Biochemistry
In the College of Sciences

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http://www.chemistry.sdsu.edu

Faculty
William G. Tong, Ph.D., Distinguished Professor of Chemistry and Biochemistry, Interim Chair of Department
Andrew L. Cooksy, Ph.D., Professor of Chemistry and Biochemistry
Douglas B. Grotjahn, Ph.D., Professor of Chemistry and Biochemistry (Graduate Admissions Adviser)
Robert P. Metzger, Ph.D., Professor of Chemistry and Biochemistry, Emeritus
William E. Stumpf, Ph.D., Professor of Chemistry and Biochemistry, Emeritus
B. Mikael Bergdahl, Ph.D., Associate Professor of Chemistry and Biochemistry
Thomas E. Coie, 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
Tom Huxford, 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 forms and additional information may be secured from the Department of Chemistry and Biochemistry Web site at http://www.chemistry.sdsu.edu/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; 400, 500, and 600 MHz nuclear magnetic resonance (NMR) spectrometers; three FT infrared spec-

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/forms/ to download application form.
Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy as stated in Part Four of this bulletin. In addition, the student must pass orientation examinations in chemistry. These examinations should be taken during the first year in residence.

Specific Requirements for the Master of Arts Degree
(Major Code: 19051) (SIMS Code: 772602)
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the student must complete a graduate program of 30 units which includes a major consisting of at least 24 units in chemistry from courses listed below as acceptable on master’s degree programs. At least 15 of these units must be in 600- and 700-numbered courses. Chemistry 790 is required. At least 21 units of graded graduate courses (500-level or above) must be taken in at least three of the five disciplines within chemistry. These 21 units must be numbered below 790. A maximum of three units of Chemistry 797 or 798 may be used provided a written report is approved by course instructor. This degree is offered under the non-thesis, Plan B option, as described in Part Four of this bulletin. A written comprehensive examination is required.

Specific Requirements for the Master of Science Degree
(Major Code: 19051) (SIMS Code: 772601)
In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master’s degree as described in Part Four of this bulletin. The student must also complete a graduate program of 30 units which includes a major consisting of at least 24 units in chemistry from courses listed below as acceptable on master’s degree programs. At least 15 of these units must be in 600- and 700-numbered courses. Chemistry 790, 791, 792, and 799A are required. A student must pass a final oral examination on the thesis.

General Information
(Major Code: 19051) (SIMS Code: 772603)
The cooperating faculties of the Department of Chemistry and Biochemistry at San Diego State University and the Department of Chemistry at the University of California, San Diego possess complementary specialties that enable the doctoral student to gain familiarity with most areas in chemistry and to find research activity and direction in a great variety of specific problems.
The entering student will be required to have a mastery of the subjects usually presented in the undergraduate curriculum: physical, organic, analytical, and inorganic chemistry. All applicants will be expected to have taken the equivalent of one year of physics and of mathematics at least through integral calculus. Students should be prepared to take placement examinations which will be administered by a joint committee and will cover the fields of inorganic, organic and physical chemistry.

On admission to the program, the student is guided by Requirements for the Doctoral Degree Program given in Part Four of this bulletin. Students will normally spend their first year in the program completing their year of residency at the University of California, San Diego. It is desirable for the student to complete the qualifying examination by the end of the fifth semester and to be advanced to candidacy.

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

San Diego State University:
Graduate Adviser: Thomas E. Cole
Graduate Admissions: Douglas Grotjahn
Committee Members: Beauvais, Bennett, Bergdahl, Carrano, Chatfield, Cole, Cooksy, Grotjahn, Harrison, Huxford, Kalyuzhny, Love, Metzger, Pullman, Smith, Stumph, Tong, van der Geer

University of California, San Diego:
Vice Chair of Graduate Education: Judy Kim
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

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 538. Polymer Science (3)
(Same course as Physics 538)
Prerequisites: Chemistry 200 or 202; and Chemistry 410B or Physics 360 or Mechanical Engineering 350.
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 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.

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 advisor.

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 712. Chemical Kinetics (3)
Prerequisite: Chemistry 410B.
Theory of reaction mechanisms; 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 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)
Prerequisite: Chemistry 550.
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 nonvolatile organic and inorganic compounds, basic design principles, theory of ionization processes; interpretation of mass spectra.
CHEM 753. Analytical Spectroscopy (3)
Prerequisite: Chemistry 550.

CHEM 763. Cellular Regulation (2)
Prerequisite: Chemistry 563.
The biochemistry of cellular regulatory mechanisms in eucaryotic cells. The regulation of gene transcription, in mRNA translation and post-translational processes, including the mechanism and regulation of intracellular protein turnover.

CHEM 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.-Mexican 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 want 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 borders 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)
Prerequisite recommended: Chicana and Chicano Studies 355.

CCS 595. US/Mexico Border Field Experience (3)
Prerequisite: 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: cfdev@mail.sdsu.edu

Faculty

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

Faculty Committee for Child and Family Development

Stuart C. Aitken, Ph.D., Professor of Geography
Thereasa A. Cronan, Ph.D., Professor of Psychology
Margaret Field, Ph.D., Professor of American Indian Studies
Shoshana A. Grossbard, Ph.D., Professor of Economics
Melbourne F. Hovell, Ph.D., Distinguished Professor of Public Health
Vanessa L. Maicarne, Ph.D., Professor of Psychology
Gerald Monk, Ph.D., Professor of Counseling and School Psychology
Joseph M. Price, 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

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

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

General Information

The Department of Child and Family Development offers interdisciplinary graduate study leading to the Master of Science degree in child development. Graduate teaching associateships and graduate assistantships in child development may be available to a limited number of qualified students.

Master of Science Degree in Child Development

The Master of Science degree in child development is one of only four child development programs available in the CSU. With 101 community college child development programs in California and 17 undergraduate programs within the CSU system, the M.S. program in child development plays a major role in training professionals for the State and region. The Department of Child and Family Development plays a leadership role in integration of curricula for community colleges and the CSU.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 emphasizes 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 Start, among others. Students can choose a research project or thesis. In addition to the thesis, there are projects on agencies and programs in the community. Students will have the opportunity to develop projects in the community and implement best practices of continuity of care, intergenerational programs, etc.

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

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

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.

Admission to Graduate Study

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

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

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

3. A grade point average of 3.0 in the last 60 semester units attempted.

4. Completion of the GRE General Test.

5. Completion of program application form.

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

Graduate Admissions

The following materials should be mailed or delivered directly to:

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

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

Note:
- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.
- Students with international coursework must submit an evaluation report to be considered for admission. Evaluation reports must be detailed, course-by-course evaluations with equivalent US credits and grades. Once completed, the detailed evaluation report should be sent directly to the Graduate Admissions office. SDSU recommends the following evaluation services:
  - Course-by-Course Evaluation Report
    Educational Credential Evaluators, Inc.
    P.O. Box 514070
    Milwaukee, WI 53203-3470
    414-289-3400
  - Detail Evaluation Report
    International Education Research Foundation, Inc.
    P.O. Box 3665
    Culver City, CA 90231
    310-258-9451

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

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

Department of Child and Family Development

The following materials should be mailed or delivered directly to:

Department of Child and Family Development
Attention: Dr. Shulamit N. Ritblatt, Graduate Adviser
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4502

(1) Applicant’s letter of intent which includes reason for seeking the degree and career goals;

(2) Three letters of recommendation, one of which must be from an academic reference and another from an occupational reference;

(3) A resume;

(4) A written personal statement by the applicant discussing background, interests, work experiences, abilities, and career goals as they apply to the applicant’s desire for a graduate degree in child development;

(5) Completion of a telephone or in person interview conducted by one or more members of the child development faculty.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Four of this bulletin, have identified a thesis adviser if they are in Plan A or if they have been approved to follow Plan B, and taken Child and Family Development 790 with a grade of B or better (the last requirement does not apply to students who have completed the Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRIS) certificate).

Specific Requirements for the Master of Science Degree in Child Development

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

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

Students pursuing only the Master of Science degree in child development must complete:

1. A core sequence of five courses to include Child and Family Development 634, 660 (four units required), 670, 790, and Education 690 (16 units).

2. A three unit graduate course selected in conjunction with the program adviser.

3. Nine units of any 500-level child and family development courses. (Graduate students who are alumni of the child and development program and received their Bachelor of Science degree in child development from San Diego State University, will complete the child and family development 500-level classes they did not take as part of their undergraduate program, and will select the remaining classes (to complete nine units) from other programs with the approval of the graduate adviser.)


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 Plan B).

Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRIS) Certificate

(Certificate Code: 90304) (SIMS Code: 330300)

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 (Workforce 2010). It includes two main areas: knowledge and experience. The knowledge base is comprised of four foundation classes. Two practicum courses 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)

CFD 536. Divorce and Remarriage (3)
Prerequisites: Child and Family Development 335 and Sociology 101. Proof of completion of prerequisites required: Copy of transcript. Integration of family theories and research findings. Emphasis on adjustment to divorce and remarriage throughout life cycles, across cultures, social classes, and ethnicities.

CFD 537. Child Abuse and Family Violence (3)

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

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)

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-based 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. Individual and group supervision. Maximum credit six units.

CFD 790. Research Methods and Program Development (3)
Prerequisite: Approval of graduate program adviser.
Research in child and family development: criteria and procedures for conducting research. Development of programs pertaining to children and families; literature review, proposal development, planning steps for implementation.

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

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

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

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

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

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

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

General Information
The School of Public Affairs offers graduate study leading to the Master of City Planning degree. Research facilities provided include the Institute of Public and Urban Affairs and the Public Administration Center. The San Diego metropolitan community affords significant internship opportunities for the graduate student in federal, state, and local government agencies.

Master of City Planning Degree

Admission to Graduate Study
All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. The student must possess a bachelor's or higher degree in sociology, geography, political science, economics, architecture, or landscape architecture, or any fields related to planning (students with degrees other than those listed may be allowed to enter the program under appropriate conditions). In the event that deficiencies occur in a student's background and training, the graduate committee will examine the student's past record and recommend a program to make up the deficiencies.

Students seeking admission to the graduate program in urban planning which leads to the Master of City Planning degree should address their inquiries to the director of the program. As there are specific requirements for the program it is not sufficient merely to file the general university admission forms. Students are admitted to the program in the fall and spring semesters of each year.

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

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

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

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

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

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

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

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

Advancement to Candidacy
All students must meet the general requirements for advancement to candidacy, as described in Part Four of this bulletin and be recommended by faculty. In order to be recommended for advancement, a student must have (1) achieved a grade point average of 3.0 in 15 units of city planning courses, or (2) passed satisfactorily a written examination in areas of deficiency. The examination will be offered at the end of the spring semester for all students who have completed 12 or more units of study toward the master's degree.

Specific Requirements for the Master of City Planning Degree
(Major Code: 02061)
In addition to meeting the requirements for classified graduate standing for the purpose of pursuing the Master of City Planning degree, the student must complete an approved program of study consisting of at least 48 units of approved 500-, 600-, and 700-numbered courses, with no more than nine units of 500-level courses, to include:

1. C P 625 Quantitative Techniques in Urban Planning (3)
2. Twelve units of 600- and 700-numbered courses in planning elective courses, readings and research.
3. C P 796 Internship in Urban Planning (3-6) Cr/NC
4. P A 604 Methods of Analysis in Public and Urban Affairs (3)
5. Other electives to complete program selected with the approval of adviser.
6. Students in Plan B are required to pass comprehensive written examinations in general city planning and in three areas of study. Students who have approval of the graduate adviser to pursue Plan A must include on their programs City Planning 799A, Thesis. At least 39 units must be completed in residence at San Diego State University, and at least 24 units of program courses shall be enrolled in and completed after advancement to candidacy.

Not more than a total of nine units in courses 797 and 798 will be accepted for credit toward the degree.
Courses Acceptable on Master’s Degree Program in City Planning (C P)

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

GRADUATE COURSES

C P 625. Quantitative Techniques in Urban Planning (3)
Prerequisite: Public Administration 604.
Advanced techniques for analyzing problems in city planning; emphasis on computer applications.

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

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

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

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

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

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

C P 675. Seminar in Environmental Policy and Planning (3)
Theoretical elements of environmental policy, sustainability, application to urban planning. Green site planning, urban design, and transportation policy.

C P 690. Seminar in Land Use Planning Principles and Techniques (3)
Two lectures and three hours of laboratory. Prerequisite: City Planning 660.

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

Civil Construction and Environmental Engineering
Refer to “Engineering” in this section of the bulletin.
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 120 or higher; a GRE quantitative score of 142 or higher; a combined GRE verbal and quantitative score of 300 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 whether you have established California residency;
- Indicate if you are applying for a Graduate Teaching Associate (GTA) position and describe the details of any teaching experience. If you did not major in communication as an undergraduate, indicate any communication coursework that might prepare you for teaching.
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 Course 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 only 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, interpersonal, 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
Peter Blomgren, Ph.D., Professor of Mathematics
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
Calvin W. Johnson, Ph.D., Professor of Physics
Scott T. Kelley, Ph.D., Professor of Biology
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
Michael O'Sullivan, Ph.D., Professor of Mathematics
Antonio Palacios, Ph.D., Professor of Mathematics
Paul J. Papin, Jr., Ph.D., Professor of Biology, Emeritus
Patrick J. Papin, Ph.D., Professor of Physics and Associate Dean for Academic Affairs, College of Sciences
Marie A. Roch, Ph.D., Professor of Computer Science
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., Associate Professor of Aerospace Engineering
Robert A. Edwards, Ph.D., Associate Professor of Computer Science
Gustaf Jacobs, Ph.D., Associate Professor of Aerospace Engineering
Sunil Kumar, Ph.D., Associate Professor of Electrical and Computer Engineering
John J. Love, Ph.D., Associate Professor of Chemistry and Biochemistry
David P. Pullman, Ph.D., Associate Professor of Chemistry and Biochemistry
Satchi Venkataaraman, Ph.D., Associate Professor of Aerospace Engineering
Tao Xie, Ph.D., Associate Professor of Computer Science
Robert W. Zeiler, Ph.D., Associate Professor of Biology
Kristin A. Duncan, Ph.D., Assistant Professor of Statistics

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

Graduate Admissions
The following materials should be submitted as a complete package directly to:
Graduate Admissions
Enrollment Services
San Diego State University
San Diego, CA 92182-7416
(1) Official transcripts (in sealed envelopes) from all post-secondary institutions attended;
   Note:
   • Students who attended SDSU need only submit transcripts for work completed since last attendance.
   • Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.
(2) GRE scores (http://www.ets.org, SDSU institution code 4682);
(3) English language score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).

Master of Science Degree in Computational Science
The following materials mailed or delivered to:
Computational Science Research Center (Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1245
(1) Three letters of recommendation (in sealed and signed envelopes) from persons in a position to judge academic ability;
(2) Personal statement of motivating interest for the program and briefly describe research interests and educational goals.

Ph.D. Degree in Computational Science
The following materials should be mailed or delivered to:
Computational Science Research Center (Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1245
(1) Three letters of recommendation (in sealed and signed envelopes) from former or current professors, supervisors, or other appropriate persons;
(2) Applicant's statement of purpose, explaining their interest in the program;
(3) Claremont Graduate University application form available at http://www.csrc.sdsu.edu;
(4) Joint doctoral program in computational science application form available at http://www.csrc.sdsu.edu;
(5) Copies of official transcripts from all post-secondary institutions attended.
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 799A to include:

**Required core courses (18 units):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>COMP 526</td>
<td>Computational Methods for Scientists (3)</td>
<td>3</td>
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<tr>
<td>OR MATH 693A</td>
<td>Advanced Numerical Methods: Computational Optimization</td>
<td>3</td>
</tr>
<tr>
<td>COMP 536</td>
<td>Computational Modeling for Scientists (3)</td>
<td>3</td>
</tr>
<tr>
<td>OR MATH 636</td>
<td>Mathematical Modeling (3)</td>
<td>3</td>
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<tr>
<td>COMP 589</td>
<td>Computational Imaging (3)</td>
<td>3</td>
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<tr>
<td>OR CS 559</td>
<td>Computer Vision (3)</td>
<td>3</td>
</tr>
<tr>
<td>OR EE 657</td>
<td>Digital Image Processing (3)</td>
<td>3</td>
</tr>
<tr>
<td>COMP 605/605</td>
<td>Scientific Computing (3)</td>
<td>3/3</td>
</tr>
<tr>
<td>COMP 626</td>
<td>Applied Mathematics for Computational Scientists (3)</td>
<td>3</td>
</tr>
<tr>
<td>OR MATH 693B</td>
<td>Advanced Numerical Methods: Computational Partial Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>COMP 670</td>
<td>Seminar: Problems in Computational Science (3)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Elective courses (9 units):**

- COMP 521 Introduction to Computational Science (3) OR MATH 542 Introduction to Computational Ordinary Differential Equations (3)
- COMP 604 Computational and Applied Statistics (3) OR STAT 670A Advanced Mathematical Statistics (3)
- COMP 607 Computational Database Fundamentals (3) OR CS 503 Scientific Database Techniques (3)

With consent of the program director, 600-level courses from other departments can be taken based on the student’s background and research interest.

**Project (3 units):**

- COMP 799A Thesis (3) Cr/NC/RP

Substitution of core courses is permitted based on disciplines related to student’s specialization with consent of director.

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

Concentration in Professional Applications
(Offered through the College of Extended Studies)
(Major Code: 07992) (SIMS Code: 773010)
The concentration focuses on professional applications of computational science. To enter the program, students must possess a bachelors degree with a strong mathematical background. The student must complete a graduate program of 40 units to include the following:

**Required core courses (34 units):**

- COMP 526 Computational Methods for Scientists (3)
- COMP 536 Computational Modeling for Scientists (3)
- COMP 589 Computational Imaging (3)
- COMP 601 Seminar: Business Skills for the Information Age (3)
- COMP 602 Organizational Development (2)
- COMP 603 Engineering Economics for Scientists (2)
- COMP 604 Computational and Applied Statistics (3)
- COMP 606 Designing Scientific and Industrial Experiments (3)
- COMP 607 Computational Database Fundamentals (3)
- COMP 626 Applied Mathematics for Computational Scientists (3)
- COMP 670 Seminar: Problems in Computational Science (3)
- COMP 671 Problem Solving Techniques (3)

**Project (6 units):**

- COMP 797 Research (3) Cr/NC/RP
- COMP 798 Special Study (3) and comprehensive examination

Substitution of core courses is permitted based on disciplines related to student’s specialization with consent of director.

Section II.
Doctoral Program


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 aide in the development of a suitable course of study for the student, administer the student’s qualifying examination, monitor progress of student research and administer the defense of the doctoral dissertation.

Specific Requirements for the Doctor of Philosophy Degree

(Major Code: 07992) (SIMS Code: 773002)

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

- Minimum 24 units of graduate level coursework at SDSU (computational science program);
- Minimum 24 units of graduate level coursework at CGU (graduate mathematics program);
- Minimum 24 units of research, practicum, dissertation, and graduate seminar at either institution.

An additional 24 to 48 units of research, practicum, dissertation, and graduate seminar (COMP 800) may be taken at either institution. A student entering the program with a Bachelor of Science degree will satisfy the initial 24 unit requirement by completing a Master of Science degree in computational science at SDSU, then take 24 units of coursework at CGU. Students with an advanced degree other than computational science will complete appropriate courses and a research project to obtain the equivalent of an M.S. degree in computational science.

Claremont Graduate University Courses: Students are required to take 24 units at Claremont Graduate University. There is a core course requirement that must be satisfied with students selecting at least one course each from 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 written research project supervised by a faculty mentor. The topic of the project will be approved by the program directors in consultation with the faculty mentor. The student will be required to prepare a written account of the research work performed and of its results, and offer an oral presentation before the members of the advisory committee. This level of evaluation will be equivalent and coincide with the computational science Master of Science degree final examination.

Practicum and Doctoral Research. Dissertation research will be carried out here at one of the two institutions, at an industry, or at a national laboratory. In the latter two cases, its denomination is practicum.

Dissertation Proposal. The dissertation proposal shall be submitted by the student to the advisory committee no later than upon completion of the student’s third academic year in the program. The dissertation proposal will take the form of a scientific grant proposal to a major funding agency. The proposal will describe the research project that the student intends to carry out, on which the doctoral dissertation will be based. The student will also be required to deliver an oral presentation before the computational science faculty. Upon successful completion of the presentation, the student will be recommended for advancement to candidacy for the doctoral degree.

Doctoral Dissertation. Upon completion of the dissertation research, the candidate will submit the dissertation to the advisory committee. The candidate will also present a public oral defense of the dissertation. Before the presentation, an account of the work performed will be submitted for publication to a peer-reviewed, international research journal. Upon successful completion of the presentation, the candidate’s advisory committee will make a recommendation to the graduate deans.

Faculty

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

San Diego State University

Program Director: José E. Castillo


Claremont Graduate University

Program Director: John Angus

Committee Members: Angus, Cumberbatch, Dewey, Landsberg, Nadim, dePillis, Liebeskind-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.
Computational Science

SDSU courses:
2. Minimum 15 units of graduate level computational statistics coursework tailored to the student’s research interests selected in consultation with and approved by program director.

Claremont Graduate University courses:
1. Sixteen units from MATH 350, 351, 352, 353, 355, or computational statistics courses selected in consultation with and approved by program director.
2. Eight units of electives selected in consultation with and approved by program director.

Minimum 24 units of research, practicum, dissertation, and graduate seminar at either institution:
Research units at SDSU: COMP 800, 894, 897, 898, 899.
Research units at CGU: MATH 495, 498, 499.

A student with a Bachelor of Science degree will satisfy the initial 24 units of SDSU course requirements by completing a Master of Science degree in statistics at SDSU, with program of study to include Statistics 700, 701, and 702, then taking 24 units of coursework at CGU.

Faculty
The following faculty members of the cooperating institutions are available for direction of research in the statistics concentration.
San Diego State University
Program Directors: José E. Castillo and Richard A. Levine
Doctoral advisers: Bailey, Chen, Duncan, Fan, Levine, Lin, Lui
Claremont Graduate University
Program Director: John Angus
Doctoral advisers: Angus, Hardin, Martinosi, Myhre, 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)
(Certificate 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 Science 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, multidimensional 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 601. Seminar: Business Skills for the Information Age (3)
Prerequisite: Graduate standing.
Human and infrastructure management issues specific to science and technology workplaces.

COMP 602. Organizational Development (2)
Prerequisite: Graduate standing.
Contemporary organizational and leadership theory and practice through personal reflection, team assessment and feedback, and case analysis. Nature of change, forces for change, and impact of change in organizations and individuals. Organizational processes, structures and cultures, and effect on organization's performance.

COMP 603. Engineering Economics for Scientists (2)
Prerequisites: MS Excel and basic mathematics.
Systematic economic analysis of engineering problems.

COMP 604. Computational and Applied Statistics (3)
Prerequisite: Mathematics 254.
Statistical decision making and methods relevant to scientific inquiries.
COMP 605. Scientific Computing (3)  
(Same course as Computer Science 605)  
Prerequisites: Graduate standing and knowledge of the C programming language or FORTRAN or Computational Science 526.  
Parallel programming using message passing to include high performance computing and MPI language extensions. (Formerly numbered Computer Science 505.)  
COMP 606. Designing Scientific and Industrial Experiments (3)  
Prerequisite: Computational Science 604.  
Design selection, data collection, and evaluation using multiple regression to analyze experimental data.  
COMP 607. Computational Database Fundamentals (3)  
Prerequisite: Graduate standing.  
Data-processing techniques, software, database design, implementation, and manipulation.  
COMP 626. Applied Mathematics for Computational Scientists (3)  
Prerequisites: Mathematics 252 and 254.  
Linear algebra, differential equations and stability theory, and analytical methods for partial differential equations within the context of computational science.  
COMP 670. Seminar: Problems in Computational Science (3)  
Prerequisite: Graduate standing.  
Applications of computational science in solving problems using a variety of methods. Problems selected from biology, chemistry, physics, and other fields.  
COMP 671. Problem Solving Techniques (3)  
Prerequisite: Graduate standing.  
Data abstraction and problem solving skills.  
COMP 696. Selected Topics in Computational Science (3)  
Prerequisite: Graduate standing.  
Intensive study in specific areas of computational science. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.  
COMP 797. Research (1-3) Cr/NC/RP  
Prerequisite: Six units of graduate level computational science courses.  
Research in computational science. Maximum credit six units applicable to a master’s degree.  
COMP 798. Special Study (1-3) Cr/NC/RP  
Prerequisite: Consent of staff; to be arranged with program director and instructor.  
Individual study. Maximum credit six units applicable to a master’s degree.  
COMP 799A. Thesis or Project (3) Cr/NC/RP  
Prerequisites: An officially appointed thesis committee and advancement to candidacy.  
Preparation of a project or thesis for the master’s degree.  
COMP 799B. Thesis or Project Extension (0) Cr/NC  
Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of RP.  
Registration required in any semester or term following assignment of RP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.  
COMP 799C. Comprehensive Examination Extension (0) Cr/NC  
Prerequisite: Completion or concurrent enrollment in degree program courses.  
Registration required of students whose only requirement is completion of the comprehensive examination for the master’s degree. Registration in 799C limited to two semesters.  
DOCTORAL COURSES  
COMP 800. Seminar (3)  
Prerequisite: Admission to the doctoral program.  
Topics in different areas of computational science.  
COMP 810. Colloquium in Computational Science (1) Cr/NC/RP  
Prerequisite: Admission to the doctoral program.  
Discussions on advances in computational science research. Course to be taken every semester.  
COMP 894. Supervised Research, Qualifying Examination, and Dissertation Proposal (3-9) Cr/NC/RP  
Prerequisites: Admission to the doctoral program and consent of instructor.  
Research and preparation for qualifying examination. (Formerly numbered Computational Science 890 and 895.)  
COMP 896. Practicum (1-9) Cr/NC/RP  
Prerequisite: Admission to the doctoral program.  
Independent investigation in general area of field of dissertation. Conducted in industry or national laboratory under faculty supervision. Maximum credit 36 units.  
COMP 897. Doctoral Research (1-9) Cr/NC/RP  
Prerequisite: Admission to the doctoral program.  
Independent investigation in general field of dissertation. Maximum credit 36 units.  
COMP 898. Doctoral Special Study (1-3) Cr/NC/RP  
Prerequisite: Advancement to candidacy.  
Individual study leading to study and research required for doctoral dissertation.  
COMP 899. Doctoral Dissertation (1-15) Cr/NC/RP  
Prerequisites: An officially constituted dissertation committee and advancement to candidacy.  
Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the student plans to graduate.
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
Marie A. Roch, Ph.D., Professor of Computer Science
Roman W. Swinarski, Ph.D., Professor of Computer Science
Mahmoud Tarokh, Ph.D., Professor of Computer Science
Carl F. Eckberg, Ph.D., Associate Professor of Computer Science
Robert A. Edwards, 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
William A. Root, M.S., Staff Scientist

Associateships
Graduate teaching associateships in computer science are available to a limited number of qualified students. Application blanks and additional information may be secured from the chair of the Department of Computer Science.

General Information
The Department of Computer Science offers graduate study leading to the Master of Science degree in computer science. The areas in which courses are offered include software, systems, architecture, artificial intelligence, and computer science theory.

Master's level research projects are available in the following areas of computer science: artificial intelligence, databases, high performance computing, web application, distributed systems, multiprocessing, operating systems, graphics, neural networks, formal languages, numerical methods, robotics, signal processing, and computational complexity. Specialized laboratories exist for microprocessor architecture, graphics, and robotics and intelligent machines.

A master's degree in computer science provides education and creative experience to prepare graduates for advanced professional employment in industry or government, or for college-level teaching.

Admission to Graduate Study
All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. In addition, for fully classified graduate standing students must complete Computer Science 560 and 570 or equivalent. Classified graduate standing is prerequisite to all 600- and 700-level courses; conditional graduate standing is possible. Students convicted of plagiarism or cheating on examinations may lose classified graduate standing.

Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $25 application fee. All applicants must submit admissions materials to SDSU Graduate Admissions.

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

Specific Requirements for the Master of Science Degree in Computer Science
(Major Code: 07011) (SIMS Code: 773801)
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must meet the following departmental requirements:

1. Complete a minimum of 30 units of 500-, 600-, and 700-level courses selected with the approval of the adviser. One to three units of Computer Science 798 as preparation for Computer Science 799A computer science faculty member to supervise the thesis. The number of students that can be accommodated in Plan A is limited by faculty resources.)

Plan A (Thesis)
(Major Code: 07011) (SIMS Code: 773803)
A total of 30 units of 500-, 600-, 700-level courses as follows:

a. At least 15 units from Computer Science 600- and 700-level courses excluding Computer Science 797, 798, 799A. A 600-level electrical engineering course or one of the mathematics courses listed below in the ALC area of study may replace one 600-level computer science course.

b. Students select two areas of study from the areas listed below, and take at least two courses from each area.

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, 600, 660, 662, 664; Mathematics 525, 625, 626, 667, 668, 693A, 693B.

(ISR) Intelligent Systems and Robotics: Computer Science 550, 552, 553, 556, 559, 581, 582, 652, 653, 656, 657, 682.


Advanced Web and Mobile Applications Development Certificate
(Offered through the College of Extended Studies)

(Certificate Code: 90054) (SIMS Code: 773806)

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 503. Scientific Database Techniques (3)
Prerequisites: Computer Science 310 and Mathematics 245.
Fundamental data models for handling scientific data, including flat file, indexed compressed files, relational databases, and object oriented databases, and their associated query technologies; e.g. file formats, input/output libraries, string searching, structured query language, object-oriented structured query language, hypertext markup language/common gateway interface, and other specialized interfaces. Designed for computational science students. Computer science majors must obtain adviser approval. See Computer Science 514.

CS 514. Database Theory and Implementation (3)
Prerequisites: Computer Science 310 and Mathematics 245.
Database systems architecture. Storage structures and access techniques. Relational model, relational algebra and calculus, normalization of relations, hierarchical and network models. Current database systems.

CS 520. Advanced Programming Languages (3)
Prerequisites: Computer Science 237, 310, and 320.
Object oriented programming, concurrent programming, logic programming. Implementation issues.

CS 524. Compiler Construction (3)
Prerequisites: Computer Science 237, 310, and 320.

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

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

CS 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. Programming for GIS (3)
Prerequisite: Computer Science 310 or Geography 484.
Customization of Geographic Information System application development platforms with emphasis on object oriented programming and component architecture. Prominent examples are Map Objects with Visual Basic, Map Objects with Java. Considerable programming effort required, especially in Graphical User Interface development.

CS 540. Software Internationalization (3)
Prerequisite: Computer Science 310.
Principles, techniques, and resources for design and implementation of software localizable to multiple languages and/or cultures, including detailed examination of internationalization features provided by one or more widely used modern programming languages.
CS 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 the College of Extended Studies)
Prerequisite: Computer Science 310.  

CS 546. Human Computer Interfaces (3)  
(Offered only in the College of Extended Studies)
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 the College of Extended Studies)
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 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 dynamical 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.
File systems, processes, CPU scheduling, concurrent programming, memory management, protection. Relationship between the operating system and underlying architecture. Not acceptable for the M.S. degree in Computer Science.

CS 572. Microprocessor Architecture (3)
Prerequisites: Computer Science 370 and knowledge of the C programming language.

CS 574. Computer Security (3)
Prerequisites: Computer Science 310; Mathematics 245; Statistics 550; and credit or concurrent registration in Computer Science 570.
Principles of computer security and application of principles to operating systems, database systems, and computer networks. Topics include encryption techniques, access controls, and information flow controls.

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

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

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

CS 583. 3D Game Programming (3)
Prerequisite: Computer Science 310 or equivalent programming background.
Development of programming skills using software environment of a game engine and its scripting language, 3D concepts for game play, modeling, and programming. Roles needed in software development team. Contrast creation of original 3D object models for game world with incorporation of pre-created generic models.

CS 596. Advanced Topics in Computer Science (1-4)  
Prerequisite: Consent of instructor.
Selected topics in computer science. May be repeated with the approval of the instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. 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, medical informatics, and chemical 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 609. Computational Genomics and Bioinformatics (3)  
Prerequisite: Computer Science 503 or 514.  
Biological and genomic data. Application of computational algorithms to biological questions. Post-genomic techniques in annotation and comparison of microbial and eukaryotic genome sequences.

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 quadratic trees 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 635. Advanced Object-Oriented Design and Programming (3)  
Prerequisites: Computer Science 535 and knowledge of an object-oriented programming language. Advanced topics in object-oriented programming and design, code reuse, building class libraries, quality of objects, coupling, cohesion, design patterns, distributed objects.

CS 636. Management of Software Development (3)  
Prerequisite: Computer Science 532 or 535.  
Managing software projects. Modern software management process models. Project planning, cost estimation, tracking and control, staffing, risk management, and software process improvement.

CS 645. Advanced Web Application Development (3)  
(Offered only in the College of Extended Studies)  
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 the College of Extended Studies)  
Prerequisite: Computer Science 560.  
Design and implementation of applications for smart mobile phones and mobile devices. May be repeated with new content. See Class Schedule for specific content, including device types. Maximum credit six units applicable to a master’s degree.

CS 648. Advanced Topics in Web and Mobile Applications (3)  
(Offered only in the College of Extended Studies)  
Prerequisite: Computer Science 545.  
Advanced 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 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 hulls, segment intersections, polygon triangulation, orthogonal range searching, trapezoid 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.
**Computer Science**

**CS 670. Advanced Operating Systems (3)**  
Prerequisite: Computer Science 570.  
Survey of advanced operating systems including distributed systems. Associated design issues. Case studies.

**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 696. Selected Topics in Computer Science (3)**  
Prerequisite: Consent of instructor.  
Intensive study in specific areas of computer science. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

**CS 790. Practicum in Teaching of Computer Science (1) Cr/NC**  
Prerequisite: Award of graduate teaching associateship in computer science.  
Supervision in teaching computer science. Lecture writing, style of lecture presentation and alternatives, test and syllabus construction, and grading system. Not applicable to an advanced degree. Required for first semester GTA’s.

**CS 797. Research (1-3) Cr/NC/RP**  
Prerequisite: Six units of graduate level computer science courses. Research in computer science. Maximum credit six units applicable to a master’s degree.

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

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

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

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

For additional courses useful to computer scientists, see:

- **Mathematics 523. Mathematical Logic**  
- **Mathematics 541. Introduction to Numerical Analysis and Computing**  
- **Mathematics 542. Introduction to Computational Ordinary of Differential Equations**

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**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
Stuart D. Henry, Ph.D., Professor of Public Affairs,
    Director of School of Public Affairs
Ruth Xiaoru Liu, Ph.D., Professor of Sociology
Sherry Ryan, Ph.D., Professor of Public Affairs
Sheldon X. Zhang, Ph.D., Professor of Sociology
Paul J. Kaplan, Ph.D., Associate Professor of Public Affairs
Michael A. McCaIl, Ph.D., Associate Professor of Sociology
Jeffrey S. McIlwain, Ph.D., Associate Professor of Public Affairs
Alan C. Mobley, Ph.D., Associate Professor of Public Affairs
Dana M. Nurge, Ph.D., Associate Professor of Public Affairs
    (Graduate Coordinator)

Associateships
Graduate teaching associateships and graduate assistantships are available to a limited number of qualified students. Please speak with program director for more information. This program can prepare students for a career in college teaching.

General Information
The School of Public Affairs in the College of Professional Studies and Fine Arts, in conjunction with the Department of Sociology in the College of Arts and Letters, offer graduate study leading to the Master of Science degree in criminal justice and criminology.

Students pursuing a Master of Science degree in criminal justice and criminology will master criminological theory and quantitative research methods and will learn to apply the theory and methods to real-world research and policy issues. Students will also examine criminal justice policy issues at the local, state, national, and international levels.

Research facilities include the Institute of Public and Urban Affairs and the Social Science Research Laboratory. The San Diego metropolitan region affords significant research and internship opportunities for the graduate student in federal, state, and local agencies as well as in community-based organizations.

Admission to Graduate Study
All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. Students must also satisfy the following requirements: (1) a 3.0 grade point average in the undergraduate major and a 3.00 overall grade point average; (2) an acceptable score on the GRE General Test; (3) two letters of recommendation from individuals who are familiar with the student’s academic work and/or employment performance; and (4) a 500-word essay addressing professional and educational goals.

Students are expected to have undergraduate proficiency in the following four areas: (1) basic knowledge of the criminal justice system; (2) basic knowledge of criminological theory; (3) statistics; and (4) research methods.

Students whose preparation is deemed insufficient by the graduate adviser may be admitted as conditionally classified and will be required to complete specified courses in addition to the minimum required for this degree.

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

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

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

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

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

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

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy as described in Part Four of this bulletin.
Specific Requirements for the Master of Science Degree
(Major Code: 22091) (SIMS Code: 662001)
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree in Part Four of this bulletin, students must complete an officially approved course of study as outlined below. Students must earn a minimum grade point average of B (3.0) in the master's program and no less than a B- grade in each core course. All students in this program will complete a thesis or project (Plan A) or comprehensive written examination (Plan B).

Graduate Program (30 units total)
Substantive Courses (15 units required):
- CJ 601 Seminar in the Administration of Criminal Justice (3)
- CJ 602 Seminar in Comparative Criminal Justice System (3)
- CJ 603 Seminar in Community and Restorative Justice (3)
- CJ 604 Seminar in Criminal Justice and Urban Administration (3)
- CJ 605 Seminar in Juvenile Justice and Youth Violence (3)
Research Methods Courses (6 units required):
- PA 604 Methods of Analysis in Public and Urban Affairs (3)
- PA 606 Seminar in Quantitative Approaches to Public Administration (3)

Criminal Justice and Criminological Theory (3 units required):
- SOC 743 Seminar in Criminology and Criminal Justice Theory (3)
Electives (3 units required):
- CJ 570 Organized Crime: Domestic and International Perspectives (3)
- CJ 796 Internship in Criminal Justice (3) Cr/NC
- P A 660 Administration and Public Policy Development (3)
- SOC 601 Advanced Classical Social Theory: Core Course (3)
- SOC 608 Advanced Qualitative Methods: Core Course (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.

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.

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.

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.

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.

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.

GRADUATE COURSES

CJ 601. Seminar in the Administration of Criminal Justice (3)
Prerequisite: Criminal Justice 301.
Administrative problems of criminal justice systems.

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.
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.

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.

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.

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.

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 12 units.

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.

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.

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

In the College of Arts and Letters

OFFICE: Adams Humanities 4209
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
Christiania E. Hilmer, Ph.D., Professor of Economics
Jennifer Imazeki, Ph.D., Professor of Economics
Kangoh Lee, Ph.D., Professor of Economics
Edmund M. Balsdon, Ph.D., Associate Professor of Economics and
Assistant Dean in the Division of Graduate Affairs
Michael J. Hilmer, Ph.D., Associate Professor of Economics
Thitima Puttitanun, Ph.D., Associate Professor of Economics
Hisham S. Foad, Ph.D., Assistant Professor of Economics
Joseph J. Sabia, Ph.D., Assistant Professor of Economics
(Graduate Adviser)
Quazi Shahriar, Ph.D., Assistant Professor of Economics

Assistantships

A number of teaching and research assistantships are available for
qualified students. Appointments permitting up to 20 hours of service
per week are available. In addition, students interested in pursuing
teaching careers may apply for a teaching associate 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 15
for awards distributed the following academic year. Terhune awards
have 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 (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.
Courses Acceptable on Master's Degree Programs in Economics (ECON)

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

UPPER DIVISION COURSES

ECON 507. Mathematical Economics (3)
Prerequisite: Mathematics 121 or 150. Recommended: Economics 320 or 321.
Mathematical concepts as tools in understanding, developing, and illustrating economic theories. Applications of calculus and linear equations to constrained optimization, macro models, elasticity, general equilibrium, and input-output analysis.

ECON 561. International Trade (3)
Prerequisites: Economics 320 and 321.

ECON 565. North American Economic Relations (3)
Prerequisites: Economics 101 and 102. Recommended: Economics 360.
Socioeconomic development of U.S., Mexico, and Canada since World War II. Issues affecting the three countries' relations, including trade investment, technology, and international organizations and agreements.

ECON 592. International Monetary Theory and Policy (3)
Prerequisite: Economics 320 or 490.

ECON 596. Experimental Topics (3)
Prerequisite: Consent of instructor.
Intensive study in specific areas of economics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of nine units of 596 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES

ECON 630. Microeconomic Theory (3)
Prerequisite: Economics 321.
Theories of the consumer, the firm, and the market. Topics in welfare and general equilibrium. Duality and uncertainty.

ECON 631. Applied Microeconomic Methods (3)
Prerequisite: Economics 630.
Decision-making techniques in applied microeconomics including cost-benefit analysis, choice under uncertainty and applied game theory techniques.

ECON 640. Econometrics (3)
Prerequisites: Economics 321; Mathematics 120 or 121 or 150.
Measurement in economics. Use of economic models involving multiple regression analysis, simultaneous equation systems, and time series analysis.

ECON 640L. Econometrics Laboratory I (1)
Two hours of laboratory for 12 weeks.
Prerequisite: Concurrent registration in Economics 640.
Data analysis and econometric modeling using SAS. Applied statistical skills and SAS programming skills necessary to perform advanced data analysis to construct datasets, build, and estimate statistical models covered in Economics 640.

ECON 641. Applied Research in Econometrics (3)
Prerequisite: Economics 640.
Econometric applications and techniques including discrete choice, panel data simultaneous equations and time series. Data analysis and statistical software training in STATA, SAS, and SPSS.

ECON 641L. Econometrics Laboratory II (1)
Two hours of laboratory for 12 weeks.
Prerequisite: Concurrent registration in Economics 641.
Data analysis and econometric modeling using STATA. Applied statistical skills and STATA programming skills necessary to perform advanced data analysis to construct datasets, build, and estimate statistical models covered in Economics 641.

ECON 696. Experimental Topics (3)
Prerequisite: Consent of instructor.
Intensive study in specific areas of economics. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

ECON 700. Seminar in Microeconomic Applications (3)
Prerequisites: Economics 630 or classified graduate standing in another department and consent of instructor.
Microeconomic applications to individual, firm, or government. Maximum credit six units of Economics 700 applicable to a master's degree. See Class Schedule for specific content. Seminar topics include:
- Seminar in Industrial Organization and Firm Behavior
- Seminar in Labor Economics
- Seminar in Economic Issues in Demography
- Seminar in Experimental Economics

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
- Seminar in International Trade and Commercial 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.
Education
In the College of Education

General Information

The College of Education offers graduate study leading to the Master of Arts degree in education with concentrations in the following: counseling, educational technology, elementary curriculum and instruction, postsecondary educational leadership and instruction, reading education, secondary curriculum and instruction, PreK-12 educational leadership, special education, policy studies in language and cross-cultural education, and teaching. Some of these concentrations are designed to permit concurrent completion of the requirements for the corresponding 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 assistantships program can prepare students for a teaching career.

A second Ed.D. program is offered jointly with the University of San Diego. 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 5500 Campanile Drive San Diego, CA 92182-7416

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

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

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

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

The following materials should be submitted via our online program application by January 31 for the fall semester at http://coe.sdsu.edu/doc/prospective/applications.php.

(1) Program application;
(2) Three academic and/or professional recommendation forms;
(3) A two to three page personal statement;
(4) GRE – a recent score within the last five years;
(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;

SDSU GRADUATE BULLETIN 2013-2014 173
Doctor of Philosophy Degree in Education
(Major Code: 08011) (SIMS Code 331901)
http://coe.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.

Students seeking admission to the SDSU/CGU Ph.D. program in education must apply 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

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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

Faculty: Alfaro, Allen, Arvalado, Basom, Bezuk, Bober-Michel, Branch, Bresciani, Butler-Byrd, Cadiero-Kaplan, Cameron, Capello, Chance, Chizhik, Clement Lamb, Cohn, Degeneffe, Dodge, Duesbery, Evans, Farnan, Fearn, Fisher, Frey, Gallego, Gibson, Graves, Green, Hall, Hampton, Harris, Hoffman, Jacobs, James-Ward, Jeffcoat, J. F. Johnson, J. R. Johnson, Jones, Kraemer, Lapp, Mathison, Monk, Moss, Mulholland, Ochoa, Olney, Pang, Park, Philipp, Potter, Pumphian, Robinson-Zartartu, A. Rodriguez, Ross, Santa Cruz, Sax, Senour, Uline, Vaughn, Wang, Zozakiewicz

Claremont Graduate University

Dean: Scott Thomas

Faculty: Cohn, DeHart, Drew, Dreyer, Ganley, Grogan, Luschei, Paik, Perez, Perkins, Poplin, Rios-Aguilar, Robb, D. D. Smith, D. G. Smith, Thomas, Thompson

Doctor of Education Degree in Educational Leadership

(Major Code: 08271) (SIMS Code: 331930)

http://eddleaders.sdsu.edu

Admission to the Degree Curriculum

The Doctor of Education (Ed.D.) degree in educational leadership prepares leaders capable of initiating change and creating diverse educational institutions for the region’s P-14 student population. It is designed as a professional degree for PreK-12 school and community college/postsecondary leaders who will develop advanced leadership and research skills related to their own institutional settings. The program is committed to developing reflective leaders and change agents for complex educational organizations in diverse multicultural settings. Emphasizing theory, research, and practice, the program provides an opportunity for candidates to work in learning communities with faculty and practitioners to develop a deeper understanding of themselves as educational leaders and to develop the knowledge and skills needed to improve student learning. The program is offered through the Department of Educational Leadership and the Department of Administration, Rehabilitation, and Postsecondary Education. There are two concentrations: PreK-12 school leadership and community college/postsecondary leadership.

A cohort of students will be admitted by May for classes starting in the fall semester.

In addition to meeting the general admission requirements, students must be recommended for admission by the program's graduate admissions committee on the basis of standards of excellence as evidenced in the following materials:

1. An earned baccalaureate degree and master’s degree or equivalent from accredited institutions of higher education with a cumulative GPA in upper division and/or graduate study of 3.0 or above;
2. Sufficient preparation and experience pertinent to educational leadership to benefit from the program;
3. Submission of Graduate Record Examination (GRE) scores on the GRE tests;
4. Demonstrated leadership potential and skills including successful experience in schools, postsecondary education, community colleges, related fields and/or policy leadership;
5. Demonstrated academic excellence, problem-solving ability, and an interest in critically assessing and bringing about improvements within current educational policies and practices;
6. Three confidential letters of support attesting to the leadership ability and scholarship of the candidate;
7. A written statement of purpose reflecting understanding of the challenges facing the public schools or community colleges/institutions of higher education in California;
8. Professional resume;
9. Examples of professional and/or academic writings;
10. A statement of support for the candidate’s doctoral studies from her/his employer or, in the cases where this is not provided, an indication of the candidate’s plan for meeting the demands of the program and his/her professional responsibilities;
11. A personal interview with the Admissions and Standards Committee including a written response to a prompt provided by the committee.

Meeting the minimum requirements qualifies an individual for consideration, but does not guarantee admission to the program. Admission will be granted on a competitive basis.

Advancement to Candidacy

The written qualifying examination will occur at the end of the fourth semester in the program. The examination will cover the three areas of the program: (a) leadership core courses, (b) research methodology courses, and (c) concentration courses completed up to that time. The structure of the examination will be developed by the executive committee and administered by the program directors.

Once the doctoral student successfully completes the qualifying examination and has successfully completed all required courses at that stage in the program, the doctoral student will be advanced to candidacy.
Specific Requirements for the Ed.D. in Educational Leadership

Core Curriculum Requirements (27 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 (21 units)

(Major Code: 08272) (SIMS Code: 331931)
EDL 707 Educational Law and Finance (3)
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 (3)

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
Chance, Fisher, James-Ward, Johnson, Pumpian, Singh, Uline

Doctor of Education Degree

(SDSU/USD)

(Major Code: 08011) (SIMS Code: 331902)
http://www.sandiego.edu/soles/programs/education_and_teaching/graduate_programs/joint_doctoral/

No new students are being admitted to this program until further notice.
Admission to the Degree Curriculum

Students are admitted to this degree program in the fall term only, and applications for admission must be received by February 15. Application materials may be obtained from Cheryl L. Mason, program director at SDSU. The information can also be obtained on the program Web site at http://www.sandiego.edu/academics/soles/acadprog/doctoral/jointdocprog. Not all fields in which the degree is offered are available every year and cohorts of students will be accepted for admission on a 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 advisor, students will develop an area of study directly related to their educational objective.

Upon completion of 12 units of study, each student will meet with an adviser and a joint faculty committee to assess progress in the program, to develop a program of study, and to define a research focus. After 30 semester units have been completed, students are eligible to begin the qualifying examinations process. Students who successfully complete these examinations will be recommended for advancement to candidacy and will be eligible to begin the dissertation phase of the program. Once enrolled for dissertation units, students must maintain continuous registration in that course until the doctoral faculty approves the dissertation. Once enrolled for dissertation, students are ineligible to apply for an official leave of absence.

If students do not graduate at the end of the spring semester of their fifth year in the program and instead plan to graduate during the following summer, they must enroll in one dissertation unit at USD and petition both universities for graduation. Any students not graduating before the beginning of the fall semester of their sixth year in the program must enroll for three dissertation units at USD up until and including the semester of planned graduation. They must have applied for graduation at both universities the semester they actually graduate.

Faculty

The following members of the cooperating institutions participate in the joint Doctor of Education degree and are available for direction of research and as members of doctoral committees:

San Diego State University
Director: Cheryl L. Mason
Faculty: Allen, Alvarado, Basom, Bezek, Bober-Michel, Bresciani, Cadiero-Kaplan, Cappello, Chizhik, Cohn, Degeneffe, Dodge, Espinosa, Evans, Farnan, Fearn, Fisher, Frey, Gallego, Gibson, Graves, Green, Hall, Hampton, Hoffman, R. Jacobs, V. Jacobs, J. F. Johnson, J. R. Johnson, Kelly, Lamb, Lapp, Mason, Mathison, McFarlane, Moss, Ochoa, Olney, Pang, Philipp, Piland, Pumpian, Ritchie, Robinson-Zafurti, A. Rodriguez, Ross, Rossett, Saba, Santa Cruz, Sax, Uline, Wang, Zozakiewicz

University of San Diego
Director: Jerome Ammer
Faculty: Alexandrowicz, Barnes, Collins, Cordeiro, Dantas, Donmoyer, Galloway, Gelb, Getz, Hubbard, Infantino, Inoue, Monroe, Quezada, Rawell, 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.

The program is being revised to accommodate new national standards. Please check with the program director and adviser for updates.

Accreditation

The school psychology program is accredited by the California Commission on Teacher Credentialing and approved by the National Association of School Psychologists (NASP). National accreditation facilitates eligibility for National Certification in School Psychology (NCSP), however, does not guarantee certification, licensure, or credentialing outside of California. It is the student's responsibility to be aware of other states' requirements, and to arrange adjustment in the program accordingly if credentials are to be sought elsewhere.
Financial Assistance

The school psychology program has a long (since 1986) and successful record of obtaining federal funding for personnel preparation projects which provide financial support for selected full-time students. These projects are time-specific, applicants and students are referred to the program Web site and office for current information. Additionally, graduate assistantships are available to a limited number of students. The Department of Counseling and School Psychology sponsors the Gertrude Bell Scholarship and 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 December 15. We urge applicants to submit their applications by that date. The application requires three steps that must be completed simultaneously:

1. (1) All applicants must apply to the university online at http://www.csumentor.edu
2. (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. (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. GRE scores (official notification);
   - 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 experience sequence in the fall semester of their first year.

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://go.sdsu.edu/education/csp/schoolpsychology.aspx.

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 complete 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 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) The student must complete a minimum of 48 units (for concentrations in school counseling and marriage and family therapy) of 500-, 600-, 700-numbered courses, 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)
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 Prepracticum (1) Cr/NC
*CSP 662B Counseling Interventions with Children and Adolescents: School Counseling and School Psychology (3)
CSP 670 Theory and Process of Group Counseling (3)
CSP 689 Family Counseling in the Schools (1)
CSP 762 Prevention, Crisis Intervention, and Conflict Resolution in Schools (3)
Or other course(s) in the department or in a related field approved by adviser.

Additional Requirements for the School Psychology Internship Credential

Candidates for the School Psychology Internship Credential must (a) hold the California Certificate of Clearance, (b) have passed the CBEST, (c) have completed one year of full-time study (residency) including two semesters of CSP 752 Seminar and Practicum: School Psychology, (d) have completed at least 500 hours of supervised field experiences in the schools, and (e) receive the formal recommendation of the school psychology faculty for the internship credential. Recommendation for the internship credential requires completion of all coursework with a 3.0 (B) average, with at least a B- (or Cr in Cr/NC courses) in each course, except for CSP 760 Advanced Seminar in School Psychology, which is completed in conjunction with 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)

The following materials should be mailed or delivered to:

Department of Counseling and School Psychology
School Counseling Program
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1179

(1) Completed program application form (http://edweb.sdsu.edu/csp/admissions/admissions.htm);

(2) Three letters of recommendation;

(3) Personal statements;

(4) Resume;

(5) California Basic Educational Skills Test (CBEST) School Counseling only.

Master of Science Degree in Counseling
Marriage and Family Therapy
(Major Code: 08261) (SIMS Code: 331006)

The following materials should be mailed or delivered to:

Department of Counseling and School Psychology
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:

Department of Counseling and School Psychology
Community Based Block Program
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1179

(1) Department application (http://edweb.sdsu.edu/csp/admissions/admissions.htm);

(2) Two letters of recommendation.

Educational Leadership: Specialization in PreK-12
(Major Code: 08271)

The following materials should be mailed or delivered to:

Department of Educational Leadership
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1190

(1) Department application;

(2) Two letters of recommendation;

(3) California Basic Educational Skills Test (CBEST) scores.
Educational Technology  
(Major Code: 08992) (SIMS Code: 331937)  
The following materials should be mailed or delivered to:  
Department of Educational Technology  
Campus Program  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1182  
(1) Department application available at  
http://edtec.sdsu.edu/apply.htm;  
(2) Three letters of recommendation (in sealed envelopes);  
(3) Personal statement.

Elementary Curriculum and Instruction  
(Major Code: 08021) (SIMS Code: 331946)  
No new students are being admitted to this program until further notice.

Secondary Curriculum and Instruction  
(Major Code: 08301) (SIMS Code: 331973)  
The following materials should be mailed or delivered to:  
School of Teacher Education  
College of Education  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1153  
(1) Department application.

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://coes.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-259)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1152  
(1) Department application;  
(2) Two letters of recommendation;  
(3) Letter of intent that includes reasons you wish to be admitted to the MA program;  
(4) Schedule interview with Policy Studies after submitting application.

Reading Education  
(Major Code 08301) (SIMS Code: 331964)  
The following materials should be submitted to:  
School of Teacher Education  
(Attention: Dr. Marva Cappello)  
San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-1153  
(1) Department application;  
(2) Three letters of recommendation (professional).
Specific Requirements for the Master of Arts Degree

In addition to meeting the requirements for admission to the university with classified graduate standing and the credential requirements as applicable, the student must satisfy the basic requirements for the master’s degree described in Part Four of this bulletin. In addition, the student must meet the requirements specified for one of the concentrations in education (described below). Courses common to all concentrations are Education 690 or Teacher Education 634, and Plan A, which requires Education 799A, or Plan B, in which three options are available, Education 791A (3 units) and 791B (1 unit); or Education 791A (3 units) and 791B (3 units); or Education 795A (3 units) and 795B (3 units). All candidates for the Master of Arts degree in education who elect Plan B must pass a comprehensive examination.

The Comprehensive Examination

This written examination, designed to evaluate the achievement in the specific area of the student’s concentration, is required of all candidates for the master’s degree in education. A student is eligible to take the comprehensive examination only after advancement to candidacy.

The examination is offered near the midpoint of each semester. A reservation must be made at least one week in advance of the examination. For information on exact dates, and for a reservation, check with the 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, the student may transfer to Plan A. 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 advisor, and submitted to the Office of Graduate Programs in the College of Education.

Both Plan B options provide students the opportunity (1) to have two experiences which emphasize research or evaluation and writing, (2) to participate actively in the projects of the other members of the seminar, and (3) to subject their own work to critical evaluation by the other seminar members. Both plans require the ability to formulate and define research or evaluation problems, to assemble data pertinent to the problem, to draw conclusions, and to present the study in an acceptable written form. It is expected that the seminars will be held 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 advisor.

Course Requirements

Note: Students are requested to consult with the appropriate master’s degree advisor 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.

The CBB program is being revised to accommodate licensed professional clinical counselor requirements. Please check with the program director and adviser for updates.

1. Prerequisite: Admission to the Department of Counseling and School Psychology (see Counseling and School Psychology section of this bulletin).

2. ED 690 Methods of Inquiry (3)

3. Core program (minimum of 15 units):
   a. Common Core (3 units):
      - CSP 600 Cross-Cultural Counseling Communication Skills (2)
      - CSP 600L Cross-Cultural Counseling Prepracticum (1) Cr/NC
   b. Foundations (minimum of 6 units):
      - CSP 606B Professional Issues in Mental Health Practice: Community-Based Block (3)
      - CSP 610B Determinants of Human Behavior: Social and Cultural (1-3)
      - CSP 610C Determinants of Human Behavior: Development (1-3)
      - CSP 610D Determinants of Human Behavior: School Learning (1-3)
      - CSP 610E Determinants of Human Behavior: Biological (1-3)
      - CSP 615 Seminar in Multicultural Dimensions in Counseling (3)
   c. Theory, Research, and Techniques (minimum of 6 units):
      - CSP 601 Theoretical Foundations of Counseling and Marriage and Family Therapy (3)
      - CSP 622A Ecosystems Assessment-Intervention I: Students (3)
      - CSP 622B Ecosystems Assessment-Intervention II: Schools (3)
      - CSP 623 Ecobehavioral Assessment-Intervention (3)
      - CSP 640 Testing and Assessment for Marriage and Family Therapists (2)
      - CSP 662 Counseling Interventions with Children and Adolescents (3)
      - CSP 670 Theory and Process of Group Counseling (3)
      - CSP 680 Theory and Process of Consultation (3)
   4. Electives (6-9 units) Selected in consultation with adviser and may include courses listed above.
   5. Research (3-6 units):
      - ED 799A Thesis (3) Cr/NC/RP or ED 795A-795B Seminar (3-3) or ED 791A Evaluation Techniques, ED 791B Practicum: Evaluation (6)

Educational Leadership:

Specialization in Postsecondary Education

(Major Code: 08271)

The Master of Arts degree in education with a concentration in educational leadership and a specialization in postsecondary education is intended for students pursuing leadership positions in postsecondary education, foreign school administrators, administrators of educational programs in private industry, civil service, or the nonprofit sector, administrators of technical and vocational programs or school-to-work programs, or those who have other administrative objectives in educational community and government fields.
To apply for admission into the postsecondary education specialization, a student must complete an application for admission to both the university and the postsecondary education specialization program. All applications should include at least two letters of recommendation. All applicants should note that academic degree and experience required varies with the career goal of the student. Upon admission to the university and the department, all students will discuss the degree curriculum with the graduate adviser during the first semester in the program. Only students who show reasonable promise of success in postsecondary leadership positions will be admitted to this program. In order to continue in the program, the student must demonstrate ongoing academic, professional and personal growth.

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

A minimum of 30 units to include:

1. Core program:
   - ARP 610 Educational Leadership (3)
   - ARP 477 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)
   - ED 795A-795B Seminar (3-3) or ED 799A Thesis (3) Cr/NC/RP

Educational Leadership: Specialization in Student Affairs in Postsecondary Education

(Major Code: 08271) (SIMS Code: 331913)

The Master of Arts degree in education with a concentration in educational leadership and a specialization in student affairs in postsecondary education is intended for students pursuing positions in postsecondary education, student services professionals, or those who have other administrative objectives in educational fields.

To apply for this concentration with a specialization in student affairs in postsecondary education, a student must complete an application for admission to both the university and the student affairs postsecondary education program. All applications should include at least two letters of recommendation. All applicants should note that academic degree and experience required varies with the career goal of the student. Upon admission to the university and the department, all students will discuss the degree curriculum with the graduate adviser during the first semester in the program. Only students who show reasonable promise of success in student affairs leadership positions will be admitted to this program. In order to continue in the program, the student must demonstrate ongoing academic, professional, and personal growth.

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

A minimum of 30 units to include:

1. Core program:
   - ARP 610 Educational Leadership (3)
   - ARP 620 Student Affairs in Higher Education (3)

2. Nine to 12 units selected, with the approval of the graduate adviser, from the following:
   - ARP 621 Theoretical Foundations of Student Affairs (3)
   - ARP 622 Communication and Group Process in Student Affairs Leadership (3)
   - ARP 623 Seminar in Critical Leadership Issues in Student Affairs (3)
   - ARP 680 Seminar in Administration, Rehabilitation and Postsecondary Education (3)
   - ARP 727 Emerging Issues in Postsecondary Educational Leadership (3)
   - ARP 730 Seminar in Adult Learning (3)
   - ARP 740 Advanced Seminar in Administration, Rehabilitation and Postsecondary Education (3)
   - ARP 747 Educational Leadership in a Diverse Society (3)
   - ARP 760 Internship in Postsecondary Educational Leadership (2-6) Cr/NC/RP

3. ED 690 Methods of Inquiry (3)

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

Educational Leadership: Specialization in PreK-12

(Major Code: 08271)

The Master of Arts degree in education with a concentration in educational leadership and a specialization in PreK-12 is intended for students pursuing administrative posts in PreK-12 educational organizations, including school business managers. Students who intend to pursue administrative careers in California public schools, grades PreK-12, need to obtain the Preliminary Administrative Services Credential and then the Professional Administrative Services Credential. Students in the PreK-12 specialization may earn a degree without earning a California Preliminary Services Credential or in combination with the credential.

To apply for admission into the PreK-12 specialization, a student must complete an application for admission to both the university and the Department of Educational Leadership. All applications should include two letters of recommendation from two supervisory administrators. Upon admission to the university and the program, all students will discuss the degree curriculum with the graduate adviser during the first semester in the program.

Specific Requirements for the Master of Arts degree in Education with a Concentration in Educational Leadership and a Specialization in PreK-12 Educational Leadership.

A minimum of 30 units to include:

1. Core program: Six units.
   - EDL 600 Principles of Educational Administration (3)
   - EDL 610 Educational Leadership in PreK-12 Educational Organizations (3)

2. Six to nine units selected, with the approval of the graduate adviser, from the following:
   - EDL 630 Curriculum Design and Management (3)
   - EDL 652 Seminar in Instructional Improvement and Evaluation (3)
   - EDL 655 Communication, Problem Solving, and Decision Making in PK-12 (3)
   - EDL 680 Seminar in PreK-12 Educational Administration (3) Cr/NC

3. Electives selected with the approval of the graduate adviser (6-9 units).

4. ED 690 Methods of Inquiry (3)

5. Research: Three to six units selected from the following:
   - ED 791A Evaluation Techniques (3)
   - ED 791B Practicum: Evaluation (1-3) or ED 795A-795B Seminar (3-3) or ED 799A Thesis (3) Cr/NC/RP
Specific Requirements for the Preliminary Administrative Services Credential: (Credential Code: 00501)

Successful completion of the credential requirements will qualify candidates for an EDL departmental recommendation for the California Preliminary Administrative Services Credential (PASC).

Admission Requirements: Candidates must be admitted to SDSU and to the Department of Educational Leadership. Admission to the Department of Educational Leadership requires that students possess a master's degree in education or related field from an accredited university or be concurrently enrolled in a master's degree program; have three years of teaching, pupil personnel service, librarian, or social work experience, have passed the CBEST; have two letters of recommendation from supervisory administrators and presently be working in a PreK-12 teaching environment 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 PK12 (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)

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

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). Core program (9 units): Teacher Education 646 and six units of educational research design selected with the approval of the adviser.
3. Electives (15 units): courses in educational research selected with admission to program.
4. 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 performance technologists, instructional designers, corporate trainers, and learning practitioners. 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 to include video, multimedia, print and online materials. For further information, see the coordinator of educational technology. Course requirements follow:

1. ED 690 Methods of Inquiry (3)
2. Core program (9 units)
   - EDT 540 Educational Technology (3)
   - EDT 541 Educational Web Development (3)
   - EDT 544 Instructional Design (3)
3. Electives (12-15 units): Courses in education and related fields, selected with the approval of the adviser.
4. Research (3-6 units)
   - ED 791A Evaluation Techniques (3) AND
   - ED 791B Practicum: Evaluation (1-3)
   - OR
   - ED 795A Seminar (3) AND
   - ED 795B Seminar (3)
   - 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 542. Recommended electives to be approved by the program adviser include Educational Technology 561, 596, 670, 671, 684, 775, and Special Education 650. Specialization prerequisites are Educational Technology 540 and 541.
**Specialization in Workforce Education and Lifelong Learning**  
(Major Code: 08992) (SIMS Code: 331941)

This specialization will allow students to prepare themselves as professionals who will focus on the development of education and training programs for youth and adults who are traditionally undereducated, non-college educated and who work in non-management jobs.

Students specializing in Workforce Education and Lifelong Learning pursue the following program: Prerequisites are Educational Technology 540 and 541. Required courses included in the 15 unit core are Educational Technology 544, and Administration, Rehabilitation and Postsecondary Education 565. Recommended electives to be approved by the program adviser may include: Educational Technology 572, 640, 650, 670, 684, 685; Administration, Rehabilitation and Postsecondary Education 631, 730, 747; Policy Studies in Language and Cross-Cultural Education 601; Teacher Education 631, 639.

**Elementary Curriculum and Instruction**  
(Major Code: 08021) (SIMS Code: 331946)

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

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 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.

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**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)
     - EDETEC 540 Educational Technology (3)
     - EDETEC 541 Educational Web Development (3)
     - EDETEC 570 Advanced Teaching with Technologies (3)
     - EDETEC 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)

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**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.

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* It is recommended that students enroll in PLC 686 in preparation for the comprehensive examination.
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 Secondary Curriculum and Instruction is also offered at the Imperial Valley Campus.

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

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

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

Special Education

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 many can 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

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.

Prerequisites: Special Education 527 or Basic California Teaching Credential with EEL endorsement/CLAD/BCLAD credential and Special Education 553.

Core (12 units): Education 690* and nine units selected from approved coursework in specialization area.

Advanced Specialization (10-13 units): Special Education 676, 681B, and seven units of electives selected with approval of adviser. Cumulating Experience (6 units): Education 795A-795B.
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 six units of adviser approved 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 six 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 of a maximum of six 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 a minimum of six core units and six units from the area of concentration.

Specific Requirements for the Master of Arts in Teaching Degree

(Major Code: 08292)

All candidates for the MAT will be required to take a comprehensive examination. This written examination is designed to evaluate achievement in the specific area of the student’s concentration. A student is eligible to take the comprehensive examination only after advancement to candidacy. The examination will be offered near the mid point of each semester and near the end of the summer. A reservation must be made at least one week in advance of the examination.

Master of Arts in Teaching Degree

The Master of Arts in Teaching (MAT) is designed to provide master’s level professional development as part of a teacher development continuum for K-12 teachers. The goal is to increase teachers’ expertise in curriculum and instruction in order to ensure learning and achievement for students from diverse populations. Up to six units from credential or other graduate program may count as electives in this program. 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 Education, Mathematics Education, Science Education, and Language Arts Education (summer only). Students select courses in collaboration with the graduate adviser.

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 (9 units): The core is comprised of three 3-unit courses, one selected from each area.

Area 1: Advanced Learning Theory and Applications to the Classroom

Area 2: Measurement and Assessment

Area 3: Socio-Cultural Foundations

3. Electives (6 units): Students will take two courses at the 500-, 600-, 700-level with approval of the graduate adviser.

4. Concentrations:

Elementary Education (15 units)

(Major Code: 08292) (SIMS Code: 331948)

Courses will be selected in collaboration with the graduate adviser.

- TE 530 Children’s/Adolescents’ Literature (3)
- TE 660 Curriculum Development in Education (3)
- TE 610A Seminar in Mathematics Education - Elementary School (3)
- TE 610C Seminar in Science in Elementary Education (3)
- TE 626 Advanced Educational Psychology (3)
- TE 630 Seminar in Literacy and Language Arts (3)
Education

TE 640 Planning for Teaching and Assessment in Writing (3)
TE 652 Change in Education (3)
TE 655 Sociocultural Foundations of American Education (2-3)
TE 677 Research-Based Pedagogy for Diverse Learners (3)
TE 693 Measuring and Assessing Student Achievement in Schools (3)
TE 709 Inclusive Education (3)
TE 779 Action Research in Learning Environments (3)
TE 790 Seminar in Teacher Education (3-6)
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)
PLC 600A Foundations of Democratic Schooling (3)
PLC 604 Learning and Teaching Language in a Dual Language Setting (3)
PLC 650 Curriculum Development for Urban School Communities (3)
PLC 651 Curriculum, Teaching, and Assessment:
ELD and SDAIE (1-3)

Two courses selected at the 500-, 600-, 700-level with approval of graduate adviser (6 units).

Secondary Education (15 units)
(Major Code: 08292) (SIMS Code: 331949)
Courses will be selected in collaboration with the graduate adviser.
TE 600 Curriculum Development in Education (3)
TE 629 Advanced Educational Psychology (3)
TE 640 Planning for Teaching and Assessment in Writing (3)
TE 652 Change in Education (3)
TE 655 Sociocultural Foundations of American Education (2-3)
TE 677 Research-Based Pedagogy for Diverse Learners (3)
TE 693 Measuring and Assessing Student Achievement in Schools (3)
TE 709 Inclusive Education (3)
TE 779 Action Research in Learning Environments (3)
TE 790 Seminar in Teacher Education (3-6)
PLC 600A Foundations of Democratic Schooling (3)
PLC 604 Learning and Teaching Language in a Dual Language Setting (3)
PLC 650 Curriculum Development for Urban School Communities (3)
PLC 651 Curriculum, Teaching, and Assessment:
ELD and SDAIE (1-3)

Two courses selected at the 500-, 600-, 700-level with approval of graduate adviser (6 units).

Reading Education (15 units)
(Major Code: 08292) (SIMS Code: 331950)
Courses will be selected in collaboration with the graduate adviser.
TE 530 Children's Adolescents' Literature (3)
TE 635 Assessment of Reading and Language Arts (3)
TE 639 Literacy and Language (3)
TE 779 Action Research in Learning Environments (3)

Two courses selected at the 500-, 600-, 700-level with approval of graduate adviser (6 units).

Mathematics Education (15 units)
(Major Code: 08292) (SIMS Code: 331951)
Courses will be selected in collaboration with the graduate adviser.
TE 511 Assessment in Mathematics Education (3), or another 500-, 600-, 700-level course with approval of graduate adviser (3 units)
TE 779 Action Research in Learning Environments (3)
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)

Two courses selected at the 500-, 600-, 700-level with approval of graduate adviser (6 units).

Science Education (15 units)
(Major Code: 08292) (SIMS Code: 331952)
Courses will be selected in collaboration with the graduate adviser.
TE 600 Curriculum Development in Education (3)
TE 610C Seminar in Science in Elementary Education (3)
TE 779 Action Research in Learning Environments (3)
TE 790 Seminar in Teacher Education (Science in Secondary Education) (3)
N SCI 596 Special Topics in Natural Science (3), or another 500-, 600-, 700-level course with approval of graduate adviser.

Two courses selected at the 500-, 600-, 700-level with approval of graduate adviser (6 units).

Language Arts Education (Summer Only) (15 units)
(Major Code: 08292) (SIMS Code: 331953)
Courses will be selected in collaboration with the graduate adviser.
TE 530 Children's Adolescents' Literature (3)
TE 630 Seminar in Literacy and Language Arts (3)
TE 638 Topics in Reading Education (6)
TE 640 Planning for Teaching and Assessment in Writing (3)
TE 779 Action Research in Learning Environments (3)

Two courses selected at the 500-, 600-, 700-level with approval of graduate adviser (6 units).

Master of Science Degree in Rehabilitation Counseling

General Information
The rehabilitation counseling program has the primary objective of preparing graduates to enter the field of rehabilitation and provide rehabilitation and case management services with consumers with physical, emotional, and/or cognitive disabilities. Expanded curriculum is highlighted in assistive technologies, cognitive disabilities, mental health, career assessment, administration of rehabilitation programs, disability management, diversity program development and work within the public and private sectors. The degree is accredited by the Commission on Rehabilitation Education (CORE). A limited number of graduate stipends from the Rehabilitation Services Administration are available to (1) students who are committed to entering rehabilitation in publicly supported programs after graduation, and (2) students with a financial need. Graduates qualify for CRC certification and with additional coursework, can be eligible for California licensure as a professional counselor. A limited number of students may qualify for admission to the Pupil Personnel Services – School Counseling Credential track, under a collaborative agreement with the Department of Counseling and School Psychology. Specializations and certificate programs are available in Cognitive Disabilities, Psychiatric Rehabilitation, and Rehabilitation Technology.

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

Students seeking admission to the graduate program which leads to a Master of Science degree in rehabilitation counseling should address their inquiries to the coordinator of the program. Detailed instructions concerning application procedures are available at http://www.interwork.sdsu.edu/arpe/. As there are specific requirements for the program, it is not sufficient to file only the general university admission application.

Criteria for admission require that students submit evidence in written form (i.e. personal statement, official transcripts, and recommendation letters), and undergo interviews demonstrating personal, professional, and academic adequacy for the Master of Science degree in rehabilitation counseling. Only students who show reasonable promise of success in rehabilitation counseling as a career will be admitted to this program. In order to continue in the program, the student must demonstrate ongoing academic, professional and personal growth.
A student may transfer a maximum of 30 semester units from another CORE accredited graduate program in rehabilitation counseling. Evaluation of transfer credits will be made at the time of acceptance to the program. Approval of graduate transfer credit from other programs will be at the discretion of the coordinator and subject to final approval by the Division of Graduate Affairs.

**Advancement to Candidacy**

To be eligible for advancement to candidacy the student must, in addition to holding classified graduate standing, have completed at least 24 units of the coursework listed on the official program, maintain good standing in the rehabilitation counseling program, and otherwise comply with the regulations of the Division of Graduate Affairs as described in Part Four of this bulletin.

**Specific Requirements for the Master of Science Degree in Rehabilitation Counseling**

(Major Code: 12221) (SIMS Code: 331009)

In addition to meeting the requirements for classified graduate standing, and the basic requirements for the master’s degree, as described in Part Four of this bulletin, the student must complete a minimum of 60 graduate units of 500-, 600- and 700-numbered courses, to include:

**Core program (24 units):**
- ARP 645A-645B Assessment in Rehabilitation (3-3)
- ARP 660 Theory and Process of Counseling in Rehabilitation (3)
- ARP 684 Rehabilitation Foundations (3)
- ARP 685A-685B Medical and Psychological Aspects of Disability (3-3)
- ARP 687 Placement Practices with Individuals with Disabilities (3)
- ED 690 Methods of Inquiry (3)

**15 units of required courses selected from the following:**
- ARP 607 Applications of Rehabilitation Technology (3)
- ARP 610 Educational Leadership (3)
- ARP 615 Seminar in Multicultural Dimensions in Rehabilitation Counseling (3)
- ARP 648 Group Dynamics in Rehabilitation (3)
- ARP 660 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 and Disability Systems (3)

**A minimum of six units selected from the following:**
- ARP 743 Fieldwork in Rehabilitation (3-6) Cr/NC
- ARP 744 Practicum in Rehabilitation (3-12) Cr/NC
- ARP 745 Internship in Rehabilitation (3-9) Cr/NC
- 6-9 units of electives as determined by consent of the faculty adviser.

**Comprehensive Examination**

One of three options must be completed for graduation from this program: comprehensive examination, portfolio, or thesis. The decision for this must be made by the student with the consent of the faculty adviser at least one semester prior to graduation. The student must demonstrate satisfactory performance as approved by the rehabilitation counseling program. Reservations for the examination must be made in advance in the Rehabilitation Counseling Program Office at 3590 Camino del Rio North, San Diego, CA 92108-1716.

**Program Structure**

The rehabilitation counseling program offers a 60 semester unit format that leads to the Master of Science in rehabilitation counseling. Students are accepted on a full-time and part-time basis.
# 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 as described in Part Four of this bulletin. In addition, the student must meet the requirements specified below.

## Selection of Plan A or Plan B

The selection of Plan A, the thesis or project, or Plan B, the comprehensive examination plan, is made in consultation with the adviser at the time the official program of study is filed. Plan A thesis is designed for students who have a particular research problem they wish to investigate in some detail. The Plan A project is expected to be a rigorous application of research and theory in a professional endeavor. The comprehensive examination option for Plan B requires demonstration of the integration and application of theory, research, and techniques. It is expected that the student will take the comprehensive examination concurrently with or following enrollments in Counseling and School Psychology 710A or 710B. The examination is offered near the end of each semester. Information is available from the Counseling and School Psychology office, the student’s adviser, the department Web site, or the concentration materials.

## Course Requirements

Students are expected to consult with their adviser prior to taking any coursework leading to the master’s degree. Selections of courses have been designated for the concentrations and must be reviewed with the adviser. The student must complete a minimum of 60 units of 500-, 600-, 700-numbered courses, including:

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

2. **Foundations (a minimum of 9 units):**
   - CSP 601 Theoretical Foundations of Counseling and Marriage and Family Therapy (3)
   - CSP 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 Marriage and Family Therapy Theories and Best Practices I (3)
   - CSP 640 Testing and Assessment for Marriage and Family Therapists (2)
   - CSP 662 Counseling Interventions with Children and Adolescents (3)
   - CSP 670 Theory and Process of Group Counseling (3)
   - CSP 680 Theory and Process of Consultation (3)

4. **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

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 625 Marriage and Family Therapy Theories and Best Practices I (3)
   - CSP 640 Testing and Assessment for Marriage and Family Therapists (2)
   - CSP 662 Counseling Interventions with Children and Adolescents (3)
   - CSP 670 Theory and Process of Group Counseling (3)
   - CSP 680 Theory and Process of Consultation (3)

4. **Integration and Application of Theory, Research, and Techniques (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

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.**
For additional written materials and information related to marriage and family therapy educational requirements leading to California Marriage and Family Therapy licensure, membership in marriage and family therapy professional organizations, and objectives related to pursuit of COAMFTE program accreditation, contact the Department of Counseling and School Psychology or the director at 619-594-3871 (http://edweb.sdsu.edu/csp/).

**Concentration in School Counseling**  
(Major Code: 08261) (SIMS Code: 331041)

The Master of Science in counseling with a concentration in school counseling includes coursework and experiences designed to meet the competencies required for the California Pupil Personnel Services Credential (Credential Code: 00802). This credential authorizes the holder to function as a school counselor in grades K through 12. Applicant must also apply for the M.S. in Counseling. Additional information may be obtained from the Department of Counseling and School Psychology or the director of the school counseling concentration. The sequence of the degree must be planned in consultation with the program director. The M.S. and credential has a minimum of 60 units of 500-, 600-, and 700-numbered courses, including:

1. **Prerequisites:**
   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):**
   a. ED 690 Methods of Inquiry (3)
   b. CSP 600 Cross-Cultural Counseling Communication Skills (2)
   c. CSP 600L Cross-Cultural Counseling Prepracticum (1) Cr/NC

3. **Foundations (minimum 10 units):**
   a. CSP 601 Theoretical Foundations of Counseling and Marriage and Family Therapy (3)
   b. CSP 610C Determinants of Human Behavior: Development (1-3)
   c. CSP 615 Seminar in Multicultural Dimensions in Counseling (3)
   d. CSP 620 Foundations of the Professional School Counselor Leader (3)

4. **Theory, Research, and Techniques (minimum 30 units selected in consultation with advisor):**
   a. CSP 624 Learning, Achievement, and Instruction for School Counselors (3)
   b. CSP 630 Social Justice and Holistic School Systems for School Counselors (3)
   c. CSP 645 College Planning and Career Development P-16 (3)
   d. CSP 662B Counseling Interventions with Children and Adolescents: School Counseling and School Psychology (3)
   e. CSP 670 Theory and Process of Group Counseling (3)
   f. CSP 680 Theory and Process of Consultation (3)
   g. CSP 762 Prevention, Crisis Intervention, and Conflict Resolution in Schools (3)
   h. CSP 769 The Achievement Gap: Leadership, Advocacy, Systemic Change (3)
   i. CSP 775 ASCA Model I: Developing and Implementing a School Counseling Program (3)
   j. CSP 776 ASCA Model II: Evaluating and Improving School Counseling Programs (3)

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**CSP 686** Seminar: Multicultural Family Therapy Practice in Community Settings (3)

**CSP 692** Seminar: Couples Therapy and Evidence-Based Relational Practices (3)

**CSP 693** Special Topics in Families and Larger Social Systems (1)

4. **Integration and Application of Theory, Research, and Techniques (minimum 9 units):**
   a. CSP 755 Practicum I: Marriage and Family Therapy (3) Cr/NC
   b. CSP 765 Practicum II: Marriage and Family Therapy (3) Cr/NC
   c. 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):**
   a. CSP 606A Professional Issues in Mental Health Practice: California Law and Ethics for Marriage and Family Therapy (3)
   b. CSP 618 Mental Health Recovery and the DSM: A Social Justice Perspective (3)
   c. CSP 635 Sexuality and Intimacy in Couple and Family Therapy (2)
   d. CSP 687 Mental Health, Substance Abuse, and Behavioral Addictions (1)
   e. CSP 688 Family Systems Assessment of Child Abuse (1)
   f. CSP 691 Violence in Couples' Relationships (1)
   g. CSP 694 Psychopharmacology for Marriage and Family Therapists (2)

6. **Research (3-6 units):**
   a. CSP 710A Professional Seminar (3)
   b. CSP 710B Professional Seminar (3)
   c. 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):**
   a. CSP 689 Family Counseling in the Schools (1)
   b. CSP 741 Practicum: Group Counseling (3) Cr/NC
   c. CSP 770 Advanced Seminar in Counseling (3)

Adherence to the Laws and Regulations Relating to the Practice of Marriage and Family Therapy issued by the Board of Behavioral Sciences, the Code of Ethics of the American Association for Marriage and Family Therapy, and the Code of Ethics of the California Association of Marriage and Family Therapists is mandatory. Students who knowingly or unknowingly violate any part of the laws or ethical code may be dismissed from the program without further qualification regardless of coursework completed or other academic achievement.

In addition to the requirement of maintaining a 3.0 GPA, students are reviewed for readiness to begin the clinical training sequence of the program. Students are evaluated regularly for skill development and adherence to legal and ethical standards.

Upon graduation, students apply with the Board of Behavioral Sciences, the California licensing board, for Intern Registration to continue eligibility for licensure. To qualify for marriage and family therapy licensure, students complete a qualifying graduate program, a total of 3,000 hours of clinical experience, and successfully complete two Board of Behavioral Sciences administered written examinations.
5. Integration and Application of Theory, Research, and Techniques (minimum 8 units):
   CSP 730 Fieldwork in Counseling (3) Cr/NC (CSP 730 must be taken twice)  
   CSP 740 Practicum (1-6) Cr/NC

6. Additional requirements for concentration (minimum three units selected in consultation with adviser):
   CSP 641 Psychometrics in Counseling and School Psychology (1)  
   CSP 689 Family Counseling in the Schools (1)  
   CSP 742 Policy, Politics, Law, and Ethics for School Counselors (3)

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

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 institutional code 4682).

Multiple Subject Bilingual 2042 Credential (Elementary K-6 Education): Spanish, Arabic, Filipino, Japanese, and Mandarin Emphasis  
(Credential Code: 00200)

(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;

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.

(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.

Single Subject Bilingual 2042 Credential (Secondary Education Grades 7-12: Spanish Emphasis)  
(Credential Code: 00100)

(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.

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

** See Department of Policy Studies in Language and Cross-Cultural Development, EBA-239, 619-594-6320 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 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).
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 applications through our online supplementary application:

http://go.sdsu.edu/education/ste/apply_credentials_new.aspx

Completed application packets will include items verifying satisfaction of the following:

1. CBEST Examination. Students must pass the California Basic Educational Skills Test (CBEST) prior to admission to the Multiple Subject credential program. Registration information and materials for the CBEST are available at http://www.cbest.nesinc.com. Candidates are urged to take this examination as early as possible. Candidates are required to submit a scan of the individual score reports.

2. Subject Matter Competency. Students must submit passing scores on the California Subject Examination for Teachers—Multiple Subjects (CSET-MS) in order to verify subject matter competency in diversified subjects commonly taught in self-contained classrooms. For the traditional, post-baccalaureate program (see below), test scores must be submitted prior to admission to the program. Test scores submitted for verification of subject matter competency are valid for only five years from the date the first subtest was passed and must be valid at the time of recommendation for the credential. Registration information and materials are available at http://www.cset.nesinc.com.

3. Prerequisite Courses. These courses or approved equivalents must be completed with grades of C, CR, or higher no more than seven years prior to admission to the Multiple Subject Credential Program. The courses may be in progress at the time of program application. Proof of registration is required to be considered for admission.

a. Education 451, "Introduction to Multicultural Education." This course provides an introduction to ethnicity, language, and culture in education, particularly the ways in which those factors differentially affect educational outcomes for children. The course assists in preparing teacher applicants to work with students from diverse backgrounds by examining both societal and personal belief systems and the ways 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. These letters are submitted electronically through the online application process.
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. Clearance must be granted on the CCTC Web site prior to the start of student teaching.

8. **Early Field Experience.** Candidate must successfully complete an approved course with fieldwork experience OR a minimum of 45 hours of independent observation and participation in a “regular” classroom in public elementary schools. This is documented through the Early Field Experience Guide – Multiple Subject available for downloading from the School of Teacher Education Web site at http://go.sdsu.edu/education/ste/apply_credential_step_8.aspx

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

10. **Appeals Process.** Candidates who do not meet all the admission requirements may petition the Multiple Subject Admissions and Retention Committee for individual consideration; petition letters must be submitted concurrently with the application.

   In addition to the minimum admissions standards identified above, the Multiple Subject Admissions and Retention Committee also may consider qualifications such as previous teaching experience, relevant working experience with children, and second language ability. Due to the number of applicants, application to the program does not ensure admission.

   NOTE: Appointments for discussion of individual concerns relative to the credential program may be made with the Multiple Subject Credential program advisor during the academic year through the School of Teacher Education, EBA-259, 619-594-6320. All candidates are urged to attend one of the regularly scheduled group advising sessions prior to making an individual appointment.

**Program Description**

Students who have already earned the baccalaureate or higher degree must apply to the traditional Multiple Subject Preparation Program. SDSU Liberal Studies majors may apply to either the traditional program or, if they qualify, to the Integrated Multiple Subject Preparation Program (see below). The traditional Multiple Subject Preparation Program is offered in a variety of formats called “blocks” including the full-time blocks over two semesters, and a three semester block. The Integrated Multiple Subject Preparation Program is only offered as full-time blocks over two semesters.

Full time student teaching is required of all candidates according to state law. Our programs combine coursework and student teaching to link theory and practice. The curriculum emphasizes the preparation of reflective practitioners to meet the needs of culturally and linguistically diverse children. Most blocks are based at local elementary schools where we have established partnerships with schools and teachers. In these blocks, student teachers take their university coursework on-site at the elementary school and student teach at that school or neighboring schools.

**Requirements for the Post-Baccalaureate Multiple Subject Credential Program:**

To qualify for admission, candidates must have completed (1) a baccalaureate or higher degree and (2) the Admission Standards and Qualifications for the Multiple Subject Credential Program listed above. Each student completes student teaching in two different grade levels; one assignment is at the primary level (in grades K-3) and another is at the intermediate level (in grades 4-6). All students enrolled in the traditional Multiple Subject Teacher Preparation Program will take the following courses. The schedule and sequence of the courses vary with individual block offerings.

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

**Total** | **45**

**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:

<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>PLC 915A</td>
<td>Teaching and Learning in the Content Area: ELD/SDAE: Multiple Subjects</td>
<td>3</td>
</tr>
</tbody>
</table>

SDSU GRADUATE BULLETIN 2013-2014 195
# 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 observa-
tions 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.

### Semester 2

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

### Semester 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE 961</td>
<td>Advanced Student Teaching Seminar (Cr/NC)</td>
<td>2</td>
</tr>
<tr>
<td>TE 966</td>
<td>Advanced Student Teaching in Elementary Schools</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 Bilingual 2042 Credential (Elementary K-6 Education): Spanish, Arabic, Filipino, Japanese, and Mandarin Emphasis

(Credential Code: 00200)

The Multiple Subject Bilingual 2042 Credential (Elementary Grades K through 6 Education) is available to students interested in teaching in a bilingual Spanish, Arabic, Filipino, Japanese, or Mandarin elementary school classroom. This credential authorizes the holder to teach in any self-contained bilingual or regular classroom in which one teacher is responsible for all the subjects commonly taught in the elementary schools. Because courses on methods of teaching subject areas are taught in Spanish, Arabic, Filipino, Japanese, or Mandarin, as well as English, candidates must meet the respective language of emphasis proficiency requirements as outlined below.

With the passage of Proposition 227, requiring all students in public schools to be taught in English unless a school has received a waiver, the Policy Studies Department and the College of Education remains committed to training of bilingual teachers. The credential remains as the most desirable credential in California. Furthermore, the university is committed to developing leaders in cultural, economic, educational, scientific, social, and technical fields, as well as addressing the linguistic diversity of school communities. The university is primarily responsive to the people of California, as well as to the needs of the regional, national, and international communities it serves.

Candidates who will pursue this credential need to specify “Multiple Subject Instruction–Bilingual” in the application for graduate admission to SDSU (Code: 00200).

### Standards for Admission

1. **CBEST.** Students must pass the California Basic Educational Skills Test prior to admission to the BCLAD credential program. This examination is required by the California Commission on Teacher Credentialing. Booklets containing registration forms and test information are available at [http://www.cbest.nesinc.com](http://www.cbest.nesinc.com).

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

3. **Prerequisite Courses.** The following courses must be completed with a grade of C- or better prior to admission to the program, but may be in progress at the time of application or taken in the term immediately prior to the program start date.

### Liberal Studies Majors

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC 515</td>
<td>Multilingual Education: Theory and Practice for Bilingual Teachers</td>
<td>3</td>
</tr>
<tr>
<td>ED 451</td>
<td>Introduction to Multicultural Education</td>
<td>3</td>
</tr>
<tr>
<td>SPED 500</td>
<td>Human Exceptionality</td>
<td>3</td>
</tr>
<tr>
<td>TE 280</td>
<td>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 Mathematics. . . . . . . . . . . . . . . 3

**With approval of the mathematics advisor, 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-259. 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 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 health agencies.

7. **Early Field Experience.** Applicants must provide evidence of a minimum of 30 hours of experience with students in typical elementary classroom settings within the last three years. Evidence must be documented. Completion of PLC 415 can be used to meet this requirement.
8. Oral English and Written Statement of Professional Goals and Philosophy. Have an interview with the admissions and retention committee of the PLC Department.

9. California Certificate of Clearance. This certificate represents a background clearance and check conducted by the State Department of Justice and Federal Bureau of Investigation. 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 259, telephone 619-594-6320.

11. Language and Culture Proficiency. All candidates must demonstrate minimum Language Proficiency and Cultural Awareness for the language of emphasis to meet their specific Bilingual Authorization.

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

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

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

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 2042 Program

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC 523 Psychological Foundations for Biliteracy Teachers in K-6 Classrooms</td>
<td>3</td>
</tr>
<tr>
<td>PLC 532 Biliteracy Teaching in Language Arts for Elementary Students</td>
<td>3</td>
</tr>
<tr>
<td>PLC 910 Teaching Mathematics to Bilingual Students</td>
<td>3</td>
</tr>
<tr>
<td>PLC 911 Teaching Social Studies to Bilingual Students</td>
<td>3</td>
</tr>
<tr>
<td>PLC 912 Teaching Science to Bilingual Students</td>
<td>3</td>
</tr>
<tr>
<td>PLC 915A Teaching and Learning in the Content Area: English Language Development/SDAIE: Multiple Subjects</td>
<td>3</td>
</tr>
<tr>
<td>PLC 931 Skills in Teaching Reading to Bilingual Elementary Students</td>
<td>3</td>
</tr>
<tr>
<td>PLC 954 Classroom Organization for Democratic Teaching in Bilingual Classrooms</td>
<td>1-4</td>
</tr>
<tr>
<td>PLC 960 Professional Seminar for Bilingual Teacher Candidates (Cr/NC)</td>
<td>1-4</td>
</tr>
<tr>
<td>PLC 961 Practicum in Elementary Bilingual Classroom (Cr/NC)</td>
<td>1-12</td>
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<td>PLC 962 Student Teaching for Elementary Bilingual Students II (Cr/NC)</td>
<td>8</td>
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<td>ED 970 Teaching Event Assessment (Cr/NC)</td>
<td>3</td>
</tr>
<tr>
<td>EDTEC 470 Technologies for Teaching</td>
<td>3</td>
</tr>
</tbody>
</table>

Preliminary 2042 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-259)
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 Califor-
nia Commission on Teacher Credentialing. Booklets containing
registration forms and test information are available at

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

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>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC 515</td>
</tr>
<tr>
<td>ED 451 or SPED 527</td>
</tr>
<tr>
<td>SPED 500</td>
</tr>
<tr>
<td>SPED 501 or PLC 523</td>
</tr>
<tr>
<td>SPED 502</td>
</tr>
<tr>
<td>SPED 524</td>
</tr>
<tr>
<td>TE 280</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 ele-
mentary 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, pri-

vate 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 ele-
mentary 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 bilin-
gual 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. Candi-
dates must submit live scan and personal information directly to the
California Commission on Teacher Credentialing, http://
www.ctc.ca.gov. A copy of the certificate of clearance must be
provided to the PLC Department.

10. Credential Advising Appointment. Each applicant must meet
with a faculty adviser to plan an appropriate. Make appointment in
EBA-259, telephone 619-594-6320.

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 Admis-
sions and Retention Committee for individual consideration; peti-
tion letters must be submitted concurrently with the application
packets.

14. Application. Applicants should complete application proce-
dures the semester prior to beginning the credential program.
Call the department for Policy Studies application deadline.

In addition to the minimum admissions standards identified above,
the PLC and SPED Department Admissions and Retention Committee
may also consider qualifications such as previous teaching experience
and relevant working experience with children. Due to the number of
applicants, application to the program does not ensure admission.

Program: Year One

<table>
<thead>
<tr>
<th>Program</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>EDTEC 470</td>
<td>Technologies for Teaching</td>
</tr>
<tr>
<td>PLC 523</td>
<td>Psychological Foundations for Literacy Teachers in K-6 Classrooms</td>
</tr>
<tr>
<td>PLC 532</td>
<td>Biliteracy Teaching in Language Arts for Elementary Students</td>
</tr>
<tr>
<td>PLC 910</td>
<td>Teaching Mathematics to Bilingual Students</td>
</tr>
<tr>
<td>PLC 911</td>
<td>Teaching Social Studies to Bilingual Students</td>
</tr>
<tr>
<td>PLC 912</td>
<td>Teaching Science to Bilingual Students</td>
</tr>
<tr>
<td>PLC 915A</td>
<td>English Language Development/SDIAE: Multiple Subjects</td>
</tr>
<tr>
<td>PLC 931</td>
<td>Skills in Teaching Reading to Bilingual Elementary Students</td>
</tr>
<tr>
<td>PLC 954</td>
<td>Classroom Organization for Democratic Teaching in Bilingual Classrooms</td>
</tr>
<tr>
<td>PLC 960</td>
<td>Professional Seminar for Bilingual Teacher Candidates (Cr/NC)</td>
</tr>
<tr>
<td>PLC 961</td>
<td>Practicum in Elementary Bilingual Classroom (Cr/NC)</td>
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<tr>
<td>PLC 962</td>
<td>Student Teaching for Elementary Bilingual Students II (Cr/NC)</td>
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<td>ED 970</td>
<td>Teaching Event Assessment (Cr/NC)</td>
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Program: Year Two

<table>
<thead>
<tr>
<th>Program</th>
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</thead>
<tbody>
<tr>
<td>SPED 505</td>
<td>Educational Services for Students with Serious Emotional Disturbance</td>
</tr>
<tr>
<td>SPED 534</td>
<td>Classroom Assessment of Students with Mild/Moderate Disabilities</td>
</tr>
<tr>
<td>SPED 553</td>
<td>Behavioral Strategies and Supports for Students with Disabilities</td>
</tr>
<tr>
<td>SPED 560</td>
<td>Applications of Technology for Individuals with Disabilities</td>
</tr>
<tr>
<td>SPED 647</td>
<td>Special Education Adaptations of Basic Skills Instruction</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/CTSET.
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 major classrooms in preschools, grades K-12, and in classes organized primarily for adults (classes where instruction is provided in only one subject). Candidates must verify subject matter competency in one of the following subject fields:

ACCEPTABLE SINGLE SUBJECT CREDENTIAL AREAS AND APPLICABLE MAJORS

Art: Art (currently accepting applications from SDSU undergraduate majors only)
English language arts: Comparative Literature, English
Mathematics: Mathematics

Music: Music (currently accepting applications from SDSU undergraduate majors only)

Physical education: Kinesiology (Specialization in Physical Education) (currently accepting applications from SDSU undergraduate majors only)

Science: Biology, Chemistry, Physical Science

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 College of Education, Office of Student Services, EBA-259, to clarify the appropriate means for satisfaction of the subject matter competency requirement in their subject matter area(s). Competency must be verified and assessed by a designated departmental adviser regardless of the means of establishing knowledge proficiency.
5. Demonstrated knowledge of the principles and provisions of the United States Constitution through successful completion of a three-unit collegiate-level course or examination. (Courses are listed in the section of this catalog on “Graduation Requirements,” IV. American Institutions Requirement.)
6. Knowledge of health education, including substance abuse and nutrition: Public Health 101, or Teacher Education 280, and verification of CPR competency.
7. Demonstrated knowledge of the needs of and methods of providing educational opportunities to individuals with exceptional needs: Special Education 450 or 500.
8. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy).

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 an online departmental application to the School of Teacher Education. Contact the School of Teacher Education for application dates or find them at http://go.sdsu.edu/education/site/apply_credentials_new.aspx. Completed applications 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 scan 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...
Education

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.

      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. These letters are now submitted electronically through our online application process.

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 California 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. Clearance must be granted on the CCTC Web site prior to the start of the student teaching.

8. Early Field Experience. Candidate must successfully complete an approved course with field work experience OR a minimum of 45 hours of independent 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://go.sdsu.edu/education/ste/apply/credential-step8.aspx.

9. PACT. 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 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, applicants 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 prior to the academic year through the School of Teacher Education, EBA-259, 619-594-6320. All candidates are urged to attend one of the regularly scheduled group advising sessions prior to making an individual appointment.

Program Description

The Single Subject Credential Program is offered in a variety of formats called “blocks” to include full-time blocks over two semesters and a three semester block. Full-time student teaching is required of all candidates according to State law. Examinations and/or coursework prerequisite to program admission, if not completed within undergraduate studies, may extend the total time commitment for credential issuance by one or more semesters. The second semester student teaching assignment represents a commitment of three periods a day in a local public school with the possible addition of an administrative assignment at the same site. Students may be required to remain with their placement for the public school semester, which can be three to four weeks longer than the university term.

The three semester block courses are generally offered in the late afternoon and early evening. Student teaching assignments do require a daytime commitment and will be scheduled according to individual need in consultation with the program coordinator.

Our programs combine coursework and student teaching to link theory and practice. The curriculum emphasizes the preparation of reflective practitioners to meet the needs of culturally and linguistically diverse children. Each student typically completes student teaching in two different grade levels; one assignment is at the middle school level (in grades 6-8) and another is at the high school level (in grades 9-12). All students enrolled in the Single Subject Teacher Preparation Program will take the following courses. The scheduling and sequence of the courses vary with individual block offerings.

Single Subject Required Courses

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE 903</td>
<td>Secondary School Student Teaching</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 of 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/NCR/RF)</td>
<td>4</td>
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<tr>
<td>TE 964</td>
<td>Secondary School Student Teaching II (Cr/NCR/RF)</td>
<td>12</td>
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<td>ED 970</td>
<td>Teaching Event Assessment (Cr/NCR)</td>
<td>3</td>
</tr>
<tr>
<td>PLC 915B</td>
<td>Teaching and Learning in the Content Area:</td>
<td>3</td>
</tr>
</tbody>
</table>

Total 37-40
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:

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Units</th>
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<tbody>
<tr>
<td>TE 362</td>
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<td>TE 954</td>
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<td>PLC 91SB</td>
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<table>
<thead>
<tr>
<th>Semester 2</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>TE 903</td>
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<tr>
<td>TE 914</td>
<td>1</td>
</tr>
<tr>
<td>TE 922</td>
<td>3</td>
</tr>
<tr>
<td>TE 933</td>
<td>3</td>
</tr>
<tr>
<td>TE 963</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 3</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>TE 903</td>
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<td>TE 966</td>
<td>2</td>
</tr>
<tr>
<td>TE 970</td>
<td>10</td>
</tr>
</tbody>
</table>

CPR Requirement: All candidates for the preliminary credential are required to verify current training in cardiopulmonary resuscitation (CPR). Verification of the CPR training is made through submission of a photocopy of the card issued by the training agency. While many agencies provide CPR training, verification must be made at levels identified by the American Heart Association (AHA) or the American Red Cross (ARC). Candidates pursuing training through agencies other than these will be required to verify the level of training relative to either the AHA or ARC standards either from the data provided directly on their card or on a supplementary letter on letterhead stationary from their training agency (no phone call verifications).

Single Subject Bilingual 2042 Credential (Secondary Education Grades 6 through 12): Spanish Emphasis

(Credential Code: 00100)

The Single Subject Bilingual (Spanish) Teaching Credential (Secondary Education) is available for students interested in teaching in a bilingual middle or secondary school classroom. This credential authorizes the holder to teach in any self-contained bilingual or regular classroom in which one teacher is responsible for teaching the given subject area.

Candidates who will pursue this credential need to specify “Single Subject Credential Bilingual” in the application for graduate admission to SDSU (Credential Code: 00100). Students applying for admission should electronically submit the university application available at http://www.csusmteerpdg 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.cbtest.nesinc.com.

2. Subject Matter Competency. Students must verify competency in a specified single subject area through a university assessment process which consists of reviewing coursework for completion of an approved teaching major or its equivalent at San Diego State University or another approved California teacher-training institution or through California Subject Examinations for Teachers (CSET). Competency will be assessed and verified by subject matter departments at SDSU. Requirements for the various single subject majors are listed with the academic majors in the General Catalog. Test scores submitted for verification of subject matter competency are valid for five years from the date of the examination. Information and registration materials are available at http://www.cset.nesinc.com.

3. Prerequisite Courses: The following courses must be completed with a grade of C- or better prior to admission to the program, but may be in progress at the time of application or taken in the term immediately prior to the program start date.

<table>
<thead>
<tr>
<th>Units</th>
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<tbody>
<tr>
<td>PLC 515 Multilingual Education: Theory and Practice for Biliteracy Teachers</td>
</tr>
<tr>
<td>ED 451 Introduction to Multicultural Education</td>
</tr>
<tr>
<td>SPED 500 Human Exceptionality</td>
</tr>
<tr>
<td>TE 280 Health Education for Teachers</td>
</tr>
</tbody>
</table>

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

5. Letter of Recommendation. Two professional references and one letter of recommendation must be submitted attesting to the applicant’s following characteristics: (a) attitude, aptitude and ability to teach children; (b) personality and character; (c) academic ability. Letter of recommendation should be from a school teacher with whom the student has worked and the others may be from faculty and administrators.

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

7. Early Field Experience. Applicants must provide evidence of a minimum of 45 hours of experience with adolescent students in typical classroom settings within the last five years. Evidence must be documented.

8. Oral English and Written Statement of Professional Goals and Philosophy. Have an interview with the admissions and retention committee of the PLC Department.

9. California Certificate of Clearance. This certificate represents a background clearance and check conducted by the State Department of Justice and Federal Bureau of Investigation. Turnaround time for the clearance can take as long as eight months. Possessors of K-12 California credentials may satisfy this requirement by submitting copies of those certificates. Candidates must submit the application directly to the California Commission on Teacher Credentialing. A copy of the application must be provided to the PLC Department.
10. **Credential Advising Appointment.** Each applicant must meet with a faculty adviser to plan an appropriate program, which includes a minimum of 31 units as defined by the Commission on Teacher Credentialing. Appointments can be made in EBA-259, 619-594-6320.

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 2042 Program

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

**First Semester**

| PLC 450 The Secondary School and Bilingual Education | 3 |
| PLC 524 Psychological Foundations for Bilingual Teachers in Grades 7-12 | 3 |
| PLC 933 Skills in Teaching Reading to Bilingual Secondary Students | 3 |
| PLC 953 Language Development in Bilingual Secondary Classrooms | 3 |
| PLC 954 Classroom Organization for Democratic Teaching in Bilingual Classrooms | 1-4 |
| PLC 963 Practicum in Secondary Bilingual Classroom (Cr/NC) | 3-4 |
| TE 914 Teaching and Learning in the Content Area: Major | 3 |

**Second Semester**

| PLC 915B Teaching and Learning in the Content Area: ELD/SDAIE: Single Subjects | 3 |
| PLC 960 Professional Seminar for Bilingual Teacher Candidates (Cr/NC) | 1-4 |
| PLC 964 Student Teaching for Bilingual Secondary Students II (Cr/NC) | 8-12 |
| 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-259, 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.

**Bilingual Cross-Cultural Specialist Credential**

(Credential Code: 00440)

The Bilingual Cross-Cultural Specialist Credential will prepare teachers to be mentors, curriculum, and staff developers. Teachers will acquire skills in being reflective practitioners, facilitators of critical inquiry and cultural mediators linked with the school community through action research. The credential leads to the Policy Studies in Language and Cross-Cultural Education M.A. Option 1.

**Prerequisites:** CLAD or BCLAD credential or certificate; minimum three years teaching experience; admission to program.

### Program

24 units of coursework and a comprehensive examination to include:

<table>
<thead>
<tr>
<th>Units</th>
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<tbody>
<tr>
<td>ED 690 Methods of Inquiry</td>
</tr>
<tr>
<td>PLC 553 Language Assessment and Evaluation in Multicultural Settings</td>
</tr>
<tr>
<td>PLC 600A Foundations of Democratic Schooling</td>
</tr>
<tr>
<td>PLC 663 Community and Schools in a Diverse Society</td>
</tr>
<tr>
<td>PLC 650 Curriculum Development for Urban School Communities</td>
</tr>
<tr>
<td>PLC 686 Seminar in Multicultural Education</td>
</tr>
</tbody>
</table>

OR

Six 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 model.

For additional information, contact Carol Prime (prime@mail.sdsu.edu).

Reading/Language Arts Specialist Credential

(Credential Code: 00410)

San Diego State University offers a program leading to a Reading/Language Arts Specialist Credential. This credential authorizes the holder to function as a reading specialist in grades Pre-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 (25 Units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>ED 690</td>
<td>Methods of Inquiry</td>
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<tr>
<td>TE 530</td>
<td>Children’s/Adolescents’ Literature</td>
<td></td>
</tr>
<tr>
<td>TE 631</td>
<td>Seminar in Language Arts</td>
<td></td>
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<tr>
<td>TE 633</td>
<td>Leadership in Literacy Education</td>
<td></td>
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<tr>
<td>TE 635</td>
<td>Assessment of Reading and Language Arts</td>
<td></td>
</tr>
<tr>
<td>TE 637</td>
<td>Instructional Strategies for Reading and Language Arts</td>
<td></td>
</tr>
<tr>
<td>TE 639</td>
<td>Literacy and Language</td>
<td></td>
</tr>
<tr>
<td>TE 677</td>
<td>Research-Based Pedagogy for Diverse Learners</td>
<td></td>
</tr>
<tr>
<td>TE 640</td>
<td>Planning for Teaching and Assessment in Writing</td>
<td></td>
</tr>
</tbody>
</table>

Additional Requirements

1. To be eligible to apply for the credential, the candidate must have a minimum of three years of full-time K-12 teaching experience within the range of grades Kindergarten to 12.
2. Satisfactory completion of a comprehensive examination covering the program coursework.

Education Specialist Credentials in Special Education

San Diego State University offers programs leading to the following Education Specialist Credentials in Special Education authorized by the California Commission on Teacher Credentialing: Mild/Moderate Disabilities, Moderate/Severe Disabilities, and Early Childhood Special Education. These credentials authorize the holders to teach students with designated disabilities in a variety of settings. These credentials require completion of Preliminary Level I requirements followed by completion of the 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 to Preliminary Credentials

Candidates for any of the Education Specialist Credentials in Special Education must satisfy the standards and qualifications listed below and submit complete application packets to the Department of Special Education (NE 70) within designated application periods. Information about applications for Program Admission is available from the Office of Advising and Recruitment, EBA-259.

Completed departmental application packets will include items verifying satisfaction of the following:

1. CBEST Examination. Students must pass the California Basic Educational Skills Test (CBEST) prior to admission to any of the programs that lead to an Education Specialist Credential in Special Education. Information may be obtained from the Student Testing, Assessment and Research Office, SS-2549. Candidates are urged to take this examination as early as possible. Candidates are required to submit a photocopy of the individual score reports.

2. Subject Matter Competence. Students must verify completion of subject matter competence with a passing score on the CSET Multiple Subjects. Credential holders should see an adviser for clarification.

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

3. Health Education. Knowledge of health education in California, including substance and nutrition; Teacher Education 290 – Health Education for Teachers (1 unit) and verification of current CPR competency.

4. Computer Knowledge. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): Educational Technology 470. Students who complete their preliminary credential at SDSU will meet this requirement with Special Education 560.

5. United States Constitution. 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.

6. 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.

7. 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.

8. Tuberculin Clearance. Evidence of a negative tuberculosi 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 must be secured from Health Services, local health departments, or public health agencies.

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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 for traditional finger printing. Therefore, applicants are advised to use Livescan. Possessors of K-12 California credentials may satisfy this requirement by submitting copies of those certificates. In lieu of the actual Certificate of Clearance or copy of a credential, candidates may submit their clearance application packets and fees to the Credentials Processing Center, EBA-250.

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

11. 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.

12. 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**

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 930 (3 units); Special Education 530*, 534, 647*, 648, 657, 970A, 980A; and 970A (for part-time students).
   b. Moderate/Severe Disabilities: Teacher Education 930 (3 units); Special Education 526, 530, 635, 645, 647, 657, 970B, 980B; and 970B (for part-time students).
   c. Early Childhood Special Education: Special Education 526, 530, 635, 643A, 643B, 980D (Infant/Toddler), 980D (Preschool); and 970B (for part-time students).

* Not required for Early Childhood Special Education.
** Those seeking severe emotional disabilities (SED) must take these courses.
*** Those seeking autism authorization must take these courses.

**Clear Professional Induction Specialist Level II Credential 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. Partnership with Employers. Students must have a support provider who contributes to elective strand decisions and provides non-university experiences related to Clear Induction Credential.

3. 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. Core courses: Special Education 651 (3 units) and 653 (3 units)

2. Specialization elective strand: In consultation with university and school district advisers, students will take six units of 500-level or higher electives in one area or preliminary credential.

3. Knowledge of health education in California, including substance abuse and nutrition: Teacher Education 280 and verification of CPR competency or preliminary credential.

4. Demonstrated knowledge of computer hardware, software, and applications to educational/classroom use (computer literacy): Educational Technology 470. Students who complete their preliminary credential at SDSU will meet this requirement with Special Education 560 or preliminary credential.

**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 background. Each teacher leader candidate must hold a masters degree which qualifies them to teach reading recovery courses in their districts for university credit. A faculty member in the College of Education is responsible for providing coursework and supervision of teacher leader candidates.

Courses required in the program include two semesters each of clinical work, theoretical foundations, and leadership courses. Teacher leaders learn how to assess young children’s literacy progress and to use reading recovery teaching procedures to help the at-risk children learn to read and write. Teacher leaders examine the theoretical foundations of early literacy acquisition, reading recovery and early intervention, including theories specifically relevant to working with diverse children with reading difficulties. They study various aspects of the teacher leader role in the classroom and in established sites through apprenticeships with experienced teacher leaders in the field; explore issues of program implementation and systemic changes stemming from the implementation of reading recovery in districts and; consider implications of all of their knowledge and expertise as it directly relates to the effective training of reading recovery teachers.

Partnerships between San Diego State University and the districts that teacher leaders represent are established through the Reading Recovery® Teacher Leader training program. Subsequent to the training year, the program provides on-going support and professional development to teacher leaders they have trained.

The Reading Recovery® Teacher Leader training program at San Diego State University mirrors training at the other 25 university training centers in the United States. Reading recovery was first introduced at Ohio State University 15 years ago. Other universities that participate in the program include Purdue University, New York University, University of Connecticut, and Georgia State University. University trainers have a close network through which they meet on a regular basis to shape and update coursework based on current research.
Section IV. Certificate Programs

Academic Literacy Development for English Language Learners Certificate
(Certificate Code: 99050) (SIMS Code: 331999)

This certificate program provides K-12 teachers and other education professionals with specialized preparation for developing academic literacy assessment, curriculum, and teaching methods specifically designed to meet the needs of English Language Learners (ELLs). The program provides further development in theory and methods for evaluation, development, and implementation of (a) appropriate language assessment, (b) effective instruction to ELLs specific to developing academic literacy in English, and (c) culturally responsive curriculum and teaching strategies. The program is designed for professionals working in programs or classrooms with diverse language learners.

Successful applicants must have completed a bachelor's degree from an accredited institution and hold a current teaching or administrative credential. A minimum grade point average of 3.0 must be maintained in certificate coursework with no less than a grade of C in any course.

Required courses (12 units): Policy Studies in Language and Cross-Cultural Education 553, 600A or 600B, 603, 650. All courses completed with a grade of B or better are applicable to the Master of Arts degree in Education with Concentration in Policy Studies in Language and Cross-Cultural Education with a Specialization in Academic Literacy Development. For further information, contact the Policy Studies Department, 619-594-5155.

Behavior Analysis Certificate
(Certificate 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.

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)
- ED 690 Methods of Inquiry (3)

OR

Cognitive Disabilities Certificate
(Certificate Code: 99058) (SIMS Code: 331981)

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. Courses in the certificate program will complete nine units of formal coursework, three units of practicum, and six units of internship as described unless the program adviser approves alternative courses. Major assignments in all courses will focus on rehabilitation and cognitive disabilities, and the culminating assignment will be a comprehensive portfolio of work completed during the certificate.

Only three units of coursework with a grade of C will count towards the certificate. A maximum of three units of coursework can be repeated.

The program director will meet with each certificate student to design an individualized program of study based on the student's educational background and professional experience. Students may concurrently enroll in the certificate program and Master of Science degree in rehabilitation counseling. For further information call 619-594-6921.

Community College Teaching Certificate
(Certificate Code: 99043) (SIMS Code: 330302)

The purpose of this certificate program is to prepare students to teach in community colleges within the transfer, developmental, vocational, and adult education areas. The program provides students with experiences in curriculum development and evaluation, instructional techniques, methods to meet adult learning needs, and a practical internship in a local community college.

This is an advanced academic certificate at the post-baccalaureate level. Admission requirements are a bachelor's degree from a regionally accredited institution of higher education, with at least a 2.85 GPA in the last 60 units.

Students must complete the following courses with a minimum grade of B in each course and Cr in ARP 760. Courses in the certificate program may be applied to a master's degree if applicable.

- ARP 611 Program Development and Evaluation in Postsecondary Education (3)
- ARP 631 Seminar in Teaching in Postsecondary Education (3)
- ARP 730 Seminar in Adult Learning (3)
- ARP 760 Internship in Educational Leadership (3) Cr/NC/RP
Developing Gifted Potential Certificate  
(Certificate Code: 99043) (SIMS Code: 330305)

The purpose of this certificate program is to provide teachers and other education professionals with specialized preparation for supporting talent development and providing effective educational services to gifted and talented individuals in a diverse society. The certificate is designed to provide knowledge and skills to (a) encourage the development and expression of high potential, particularly among students currently underrepresented in formal programs for the gifted and (b) provide effective instruction to individuals formally identified as gifted and talented. Hence the program is designed for professionals working in regular and special classrooms settings.

Successful applicants must have completed a bachelor’s degree from an accredited institution. A minimum grade point average of 3.0 must be maintained in certificate coursework with no less than a grade of C in any course.

Required courses (15 units): Special Education 644, 649, 771, and six units selected with approval of adviser. All courses completed with a grade of B or better are applicable to the Master of Arts degree in Education with a Concentration in Special Education and a Specialization in Gifted. For further information, contact the Department of Special Education.

Distance Education Certificate  
(Certificate Code: 99044) (SIMS Code: 330303)

This certificate program will provide necessary skills to in-service managers, instructors, instructional designers, evaluators, local site coordinators, and other professionals working in distance education systems and programs in higher education, K-12, business, and government, including personnel in law enforcement, and the military. Students who complete the certificate program and meet all other criteria may apply to be admitted to the M.A. program in educational technology. For application or further information, see the program adviser in the Department of Educational Technology.

Prerequisites: A bachelor’s degree from an accredited institution with a grade point average of at least 2.85 (when A equals 4) in the last 60 semester (90 quarter) units attempted. A satisfactory score on the verbal and quantitative sections of the GRE General Test (combined score of 950). At least three years of experience in distance, open or extended education, training, HRD or a related field. Mastery in telecommuting and learning new information technology applications.

Required courses (9 units):
- EDTEC 544 Instructional Design (3)
- EDTEC 640 Psychology of Technology-Based Learning (3)
- EDTEC 650 eLearning Design and Development (3)
- EDTEC 684 Management of Educational Technology (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: Cybercogy and Engaged Learning (1)
- EDTEC 700 Seminar in Educational Technology: Management Issues in Distance Education (1)
- Electives: (3 units) to be selected from the following with approval of program adviser:
- EDTEC 640 Psychology of Technology-Based Learning (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: Cybercogy and Engaged Learning (1)

Dual Language Certificate in Biliteracy  
(Certificate 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.

Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRIS) Certificate

The certificate program in Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRIS) is an interdisciplinary program focusing on professional preparation and skills enhancement of early childhood educators who work with young children who demonstrate socio-emotional and behavioral problems and their parents.

Eighteen program units are required to earn the certificate in Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRIS). Twelve units of seminar courses addressing core knowledge foundations and six units of practicum/field experience. Courses in the certificate program may be applied to the master’s degree in child development if applicable.

Prerequisites for admission:
1. Successful completion of a bachelor’s degree in a field related to child development, psychology, social work, human development, school counseling, or social services from an accredited institution, and relevant work experience in the early childhood education field.
2. Successful completion of the application and interview process.
3. Coursework relating to: early years of development, parenting, family functioning and parent-child relationships, children with special needs, and theories in socio-emotional development. If students’ undergraduate preparation is deemed insufficient, students will be required to complete specified courses as determined by the certificate program’s adviser.
4. Recommendation of employer and/or director of certificate program.

Course requirements (18 units). The EC-SEBRIS certificate is modeled following the Delivery of Infant-Family and Early Mental Health Services Revised Training Guidelines and Personnel Competencies proposed by the California’s Infant, Preschool and Family Mental Health Initiative (2003; Workforce 2008). It includes two main areas: knowledge and experience. The knowledge base is comprised of four foundation classes. Two practicum courses that include clinical experience/supervision in early childhood setting and programs accompanied by Reflective Practice Facilitation (total of 500 hours of supervised practicum).

Students must complete the course requirements with a minimum 3.0 (B) grade point average.

Knowledge Area (12 units)
- CFD 670 Seminar in Child Development Theories – Intervention and Prevention (3)
- CFD 671 Seminar in Human Development (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 Cft/NC (3 units each semester, 500 hours of supervised practicum).

For further information, contact the program adviser, Dr. Shulamit Ritblatt.

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/UCOE 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.

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Early Childhood Special Education Authorization Certificate
(Certificate Code: 99041) (SIMS Code: 330301)
The Early Childhood Special Education Authorization Certificate is authorized by the California Commission on Teacher Credentialing. It is designed for individuals who have completed Preliminary Education Specialist Level I coursework in Mild/Moderate or Moderate/Severe disabilities. It extends authorization from birth through 22. Individuals credentialed in other areas such as Deaf and Hard-of-Hearing and Visual Impairments are authorized to serve birth through 22, but may add the certificate for professional growth reasons if desired.
1. Prerequisite: Completion of Level I coursework in one of the Education Specialist credentials and background in early childhood development with focus on infants, toddlers, and preschoolers.
2. Certificate coursework: Special Education 526, 528, 635, 643A, 643B, 980D.

Educational Facility Planning (CEFP/SDSU)
(Offers through the College of Extended Studies)
(Certificate Code: 90303) (SIMS Code: 331933)
The advanced certificate program in Educational Facility Planning (CEFP/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 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 grade of C in any course. Only two 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 repeated 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
(Certificate Code: 90302) (SIMS Code: 330302)
The purpose of the certificate is to equip postsecondary administrators in two- and four-year institutions with the knowledge and skills to access, manage, and utilize input data, student information system generated data, outcome-based assessment results, and other benchmark indicators of institutional data in their decision-making processes. Students will learn how to collect, analyze, and report these data to inform institutional decision-making processes that would include decisions to improve curriculum, as well as decisions to reallocate resources and to inform external requests for funds.

Prerequisites: A bachelor’s degree from an accredited institution with demonstrated experience in institutional research, enrollment management research, outcomes-based assessment, or planning.

Required courses (12 units):
ARP 611 Program Development and Evaluation in Postsecondary Education (3)
ARP 725 Seminar: Institutional Planning, Analysis, and Assessment (3)
ARP 727 Emerging Issues in Postsecondary Educational Leadership (3)
ARP 760 Internship in Postsecondary Educational Leadership (3) Cr/NCR/R

Three units of ARP 760 will be completed in an institutional research and/or assessment setting.
Students must maintain a minimum grade point average of 3.0 in all certificate coursework with no less than a grade of C in any course. Only three units of coursework with a grade of C will count towards the certificate. A maximum of three units of coursework may be repeated. Courses in the certificate program may be applied to a master’s degree if applicable. Students may concurrently register in the certificate program and the Master of Arts degree in educational leadership, specialization in postsecondary education.
For further information, contact the program adviser, Dr. Marilee J. Bresciani, 619-594-8318.

Instructional Design Certificate
The purpose of this certificate is to prepare specialists who can develop or assist in the development of software to meet specific instructional, training or management needs. There are two competency areas incorporated in the certificate: instructional design and educational computing. Students must complete a minimum of 18 units with a 3.0 (B) grade point average and no less than a C in any course. For application or further information, see the director of the program in the Department of Educational Technology.

Prerequisites: A bachelor’s degree from an accredited institution with a grade point average of at least 2.85 (when A equals 4) in the last 60 semester (90 quarter) units attempted. A satisfactory score on the verbal and quantitative sections of the GRE General Test.

Required courses (9 units):
EDTEC 540 Educational Technology (3)
EDTEC 541 Educational Web Development (3)
EDTEC 544 Instructional Design (3)
Elective courses: Nine units at the 600- or 700-level to be selected with the approval of the program director.

Instructional Technology Certificate
Refer to General Catalog.

Psychiatric Rehabilitation Certificate
(Certificate Code: 90170) (SIMS Code: 330320)
The purpose of the certificate is to educate rehabilitation counselors to provide effective vocational rehabilitation interventions that will result in greater workforce participation and integration of individuals who experience psychiatric disabilities. This academic certificate is designed for current and aspiring rehabilitation counselors in a variety of rehabilitation settings including public and private mental health programs, supported and competitive employment programs, postsecondary education (community college, university), out-patient hospital programs, state departments of rehabilitation, private rehabilitation agencies, or other projects funded through private or government resources that serve individuals with psychiatric disabilities.

Prerequisites: A bachelor’s degree from an accredited institution with demonstrated experience in disability-related work and/or academic coursework.
Required courses (15 units):
- ARP 660 Theory and Process of Counseling in Rehabilitation (3)
- ARP 680 Seminar in Administration, Rehabilitation and Postsecondary Education: Psychiatric Rehabilitation (3)
- ARP 687 Placement Practices with Individuals with Disabilities (3)
- ARP 740 Advanced Seminar in Administration, Rehabilitation and Postsecondary Education: Psychiatric Rehabilitation (3)
- ARP 745 Internship in Rehabilitation (3) Cr/NC

Students must maintain a minimum grade point average of 3.0 in all certificate coursework with no less than a grade of C in any course. Only three units of coursework with a grade of C will count towards the certificate. A maximum of three units of coursework can be repeated. Courses in the certificate program may be applied to a master's degree if applicable.

For further information, contact the program adviser, Dr. Marjorie F. Olney, 619-594-6883.

**Reading Certificate**

This certificate is authorized by the California Commission on Teacher Credentialing and designed to improve PreK through 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 530 Children's/Adolescents' Literature (3)
- TE 635 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**

(Official 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 as or aspire to function as program coordinators and administrators in state rehabilitation agencies, community rehabilitation programs, disability management programs, postsecondary education organizations, and other programs and/or organizations involved in serving consumers with disabilities.

This is an advanced academic certificate at the postbaccalaureate level. Admission requirements are a bachelor's degree in rehabilitation or a related field and relevant work experience in a rehabilitation organization or program. The certificate is intended to focus on diversity among consumer populations and service delivery systems within the student's area of career interest. Unique focus areas such as disability management, tribal rehabilitation or deafness, and hard-of-hearing programs are available at certain times. A master's degree in rehabilitation counseling, as well as leadership experience in rehabilitation is strongly encouraged. Relevant career or academic training experience may be substituted in lieu of the above admission criteria at the discretion of the program director. A bachelor's degree is required.

This 21-unit certificate includes the following courses:
- ARP 710A Seminar in Rehabilitation (3)
- ARP 745 Internship in Rehabilitation (3-9) Cr/NC

With the approval of the program adviser, 12 units selected from:
- ARP 610 Educational Leadership (3)
- ARP 680 Seminar in Administration, Rehabilitation and Postsecondary Education (2-6)
- ARP 710B Seminar in Rehabilitation (3)
- ARP 720 Human Resource Development in Postsecondary Education (3)
- ARP 740 Advanced Seminar in Administration, Rehabilitation and Postsecondary Education (3)
- ARP 747 Educational Leadership in a Diverse Society (3)
- ARP 755 Governance and Policy Development in Postsecondary and Disability Systems (3)
- ARP 798 Special Study (1-6) Cr/NC/RP

Contact the director of the Rehabilitation Program at 619-594-6406 (V/TTY) for further information.

Students must maintain a minimum grade point average of 3.0 in all certificate coursework with no less than a grade of C in any course. Only three units of coursework with a grade of C will count towards a certificate. Maximum of three units of coursework repeatable. Courses in the certificate program may be applied to a master's degree if applicable.

**Rehabilitation Counseling Certificate**

(Certificate 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)
Bilingual (Spanish) Special Education Certificate
(Certificate Code: 90026) (SIMS Code: 330101)

This certificate program prepares teachers of learning handicapped children whose primary language is Spanish. 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 with demonstrated experience in disability-related work and/or academic coursework. Prerequisites: A bachelor's degree from an accredited institution with demonstrated experience in disability-related work and/or academic coursework.

Required courses (9 units)

- **SPED 501** Typical and Atypical Learning Processes (3)
- **OR**
- **ARP 684** Rehabilitation Foundations (3)
- **ARP 687** Placement Practices with Individuals with Disabilities (3)
- **SPED 771** Directed Internship: Special Education (3) Cr/NC
- **OR**
- **ARP 743** Fieldwork in Rehabilitation (3) Cr/NC
- **OR**
- **CSP 730** Fieldwork in Counseling (3) Cr/NC

Twelve units of adviser approved Administration, Rehabilitation or Postsecondary Education; Special Education, and/or Counseling and School Psychology coursework.

Dr. Caren L. Sax is the program adviser in the Department of Administration, Rehabilitation and Postsecondary Education. She meets with each certificate student to design an individualized program of study based on the student's educational background and professional experience. Students may enroll in certificate program and master's degree program concurrently.

Supported Employment and Transition Specialist Certificate
(Certificate 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.

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)
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)
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 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)
Prerequisite: 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.
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.

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
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 the College of Extended Studies)
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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Faculty
Caren L. Sax, Ed.D., Professor of Administration, Rehabilitation and Postsecondary Education, Chair of Department (Graduate Adviser)
Marilee J. Bresciani, Ph.D., Professor of Administration, Rehabilitation and Postsecondary Education, Co-Director of Ed.D. in Educational Leadership with Concentration in Community College/Postsecondary Education (Graduate Adviser)
Nan Zhang Hampton, Ph.D., Professor of Administration, Rehabilitation and Postsecondary Education
L. Ron Jacobs, Ph.D., Professor of Administration, Rehabilitation and Postsecondary Education, Emeritus
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Courses Acceptable on Master's and Doctoral Degree Programs in Education (ARP)

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

UPPER DIVISION COURSES

ARP 565. Psychological Foundations of Adult and Vocational Education (3)
Prerequisite: Administration, Rehabilitation and Postsecondary Education 380.
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 609. Seminar in Rehabilitation: Policy Developments in Cognitive Disabilities (3)
Prerequisite: Admission to graduate program in rehabilitation counseling or Cognitive Disabilities certificate program.
Working with persons with intellectual disabilities, autism spectrum disorders, brain injuries, and learning disabilities. Impact of these factors and how to work effectively as clinicians, administrators, and policy makers.

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 648. Group Dynamics in Rehabilitation (3)
   Prerequisite: Admission to graduate program in rehabilitation counseling.
   Theory, dynamics, process and leadership function as applied to group work in rehabilitation. Development and application of group leadership skills/techniques for adjustment, support, skill training, self-directed groups, organizational problem solving and team-building groups in rehabilitation.

ARP 660. Theory and Process of Counseling in Rehabilitation (3)
   Prerequisite: Admission to graduate program in rehabilitation counseling.
   Counseling theories, approaches to and techniques for counseling, and research concerning counseling effectiveness.

ARP 661. 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 management styles, staff leadership, and motivation techniques as to morale and productivity. Analysis of educational personnel systems and employee programs.

ARP 725. Seminar: Institutional Planning, Analysis, and Assessment (3)
   Prerequisite: Administration, Rehabilitation and Postsecondary Education 727.
   Knowledge and skills for utilizing institutional and national data for student recruitment and institutional planning.

ARP 727. Emerging Issues in Postsecondary Educational Leadership (3)
   Prerequisite: Consent of instructor.
   Identification and analysis of emerging local, national, and international issues impacting education.

ARP 730. Seminar in Adult Learning (3)
   Patterns and implications of life-long learning. Emphasizes adult learning principles and styles, effects of adult development changes on learning, and teaching techniques in adult education programs.
ARP 740. Advanced Seminar in Administration, Rehabilitation and Postsecondary Education (3)
Prerequisite: Consent of instructor.
Study of a selected area in administration, rehabilitation or postsecondary education, such as educational law, finance, supervision, personnel procedures, etc. May be repeated with new content. See Class Schedule for specific content. Maximum credit nine units applicable to a master’s degree.

ARP 743. Fieldwork in Rehabilitation (3-6) Cr/NC
Prerequisite: Admission to graduate program in rehabilitation counseling
Orientation to the rehabilitation process including organizational goals, operating strategies, responsibilities and ethics, employee role expectations in partnership with consumers and service providers. Maximum credit six units applicable to a Master of Science degree in rehabilitation counseling.

ARP 744. Practicum in Rehabilitation (3-12) Cr/NC
Prerequisite: Admission to graduate program in rehabilitation counseling
Clinical supervision within rehabilitation systems as it relates to outreach and referral, career development, counseling, and caseload management. Maximum credit 12 units applicable to a Master of Science degree in rehabilitation counseling.

ARP 745. Internship in Rehabilitation (3-9) Cr/NC
Prerequisite: Completion of at least 24 units leading to Master of Science in rehabilitation counseling.
Supervised internship in rehabilitation setting which involves application of rehabilitation counseling experiences. Maximum credit of nine units applicable to a Master of Science degree in rehabilitation counseling or enrollment in the Rehabilitation Administration Certificate.

ARP 746. Seminar in Rehabilitation with Consumers Who Are Deaf and Hard of Hearing (3)
Prerequisite: Consent of instructor.
Characteristics and needs of deaf and hard of hearing consumers. Procedures for collaborating with consumers to develop effective rehabilitation plans, supported employment, independent living and cross-cultural counseling through American sign language.

ARP 747. Educational Leadership in a Diverse Society (3)
Prerequisite: Consent of instructor.
Current theory and practice in meeting needs of diverse learners. Leadership and administration of educational organizations as political, complex systems requiring consensus-building dynamics in a multicultural society.

ARP 755. Governance and Policy Development in Postsecondary and Disability Systems (3)
Prerequisite: Consent of instructor.
Development and examination of relevant policy and impact of politics in governance and administration in postsecondary and disability-related systems; 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 788. 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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Faculty
Nola M. Butler-Byrd, Ph.D., Associate Professor of Counseling and School Psychology, Chair of Department
(Community Based Block Graduate Advisor)
Colette L. Ingraham, Ph.D., Professor of Counseling and School Psychology (School Psychology Graduate Advisor)
Gerald Monk, Ph.D., Professor of Counseling and School Psychology
Carol A. Robinson-Zafiru, Ph.D., Professor of Counseling and School Psychology, Emeritus
Maria Nieto Senour, Ph.D., Professor of Counseling and School Psychology, Emeritus
Toni D. Green, Ph.D., Associate Professor of Counseling and School Psychology
Patricia A. (Trish) Hatch, Ph.D., Associate Professor of Counseling and School Psychology
Soh-Leong Lim, Ph.D., Associate Professor of Counseling and School Psychology
Brent A. Taylor, Ph.D., Associate Professor of Counseling and School Psychology (Marriage and Family Therapy Graduate Advisor)
Katrina Lambros Ortega, Ph.D., Assistant Professor of Counseling and School Psychology

Counseling and Marriage and Family Therapy Theories and Their Applications for Counseling and Therapy Research Impact on the Practices of Counselors, School Counselors, School Psychologists, Marriage-Family Therapists and Their Clients

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 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.)

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.

CSP 616. Mental Health Recovery and the DSM: A Social Justice Perspective (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 619. Seminar in Multicultural Dimensions in Counseling (3)
Issues, insights, and techniques for improving effectiveness in working with culturally diverse populations.

CSP 618. Social Justice, Diversity, and Policy in Counseling (3)
Prerequisite: Admission to school counseling program.
Comprehensive school counseling to include historical perspective of school counseling policies, practices, future leadership directions, role and function of professional school counselor leader. Current trends in school counseling.

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 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 627. Ecosystems Assessment - Intervention III: Policy (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 624. Learning, Achievement, and Instruction for School Counselors (3)
Prerequisite: Counseling and School Psychology 620.
Classroom management strategies and techniques. Curriculum design, lesson plan development, assessment tools, and instructional strategies for delivering school counseling core curriculum (academic, college/career, personal/social) in diverse schools.

CSP 625. Marriage and Family Therapy Theories and Best Practices 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 and Best Practices I - Activity (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. Marriage and Family Therapy Theories and Best Practices II (3)
Prerequisites: Counseling and School Psychology 625, 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 Therapy Theories and Best Practices II - Activity (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 630. Social Justice and Holistic School Systems for School Counselors (3)
Prerequisite: Counseling and School Psychology 620.
Historical and current holistic school systems and role of professional school counselor. Ecosystemic and social justice theory and models; practical implications for providing school counseling services for individual students in multicultural schools.

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
Prerequisite: Counseling and School Psychology 641.
Theories and concepts underlying psychoeducational evaluation in multicultural schools. Administration and interpretation of instruments and techniques for psychoeducational evaluation of children and adolescents.
A. Psychological Processing
B. English – Learners
C. Spanish – Speakers (proficiency required)
CSP 644. Academic Assessment - Intervention (3)
Prerequisites: Counseling and School Psychology 622A and 641. Concurrent registration in Counseling and School Psychology 730 or 740.
Current concepts of prevention and intervention strategies for students placed at risk for academic difficulties in multicultural schools. Skills in assessment of academic achievement (standardized and authentic), linked to empirically supported intervention strategies, evaluation of intervention effectiveness.

CSP 645. College Planning and Career Development P-16 (3)
Prerequisite: Counseling and School Psychology 620.
College planning, career readiness, and career technical education P-16. Technology promoting equity, access, and opportunity for culturally diverse populations to post secondary options.

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 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: Multicultural Family Therapy Practice in Community Settings (3)
Prerequisites: Counseling and School Psychology 625 and 740.
Integration of gender and cultural factors into family systems theory and practice.

CSP 687. Mental Health, Substance Abuse, and Behavioral Addictions (1-3)
Prerequisite: Counseling and School Psychology 625.
Mental health issues, models of intervention related to substance abuse, behavioral addictions for individuals, couples, and families. Treatment issues of interdependence, power, intimacy, generational patterns, addiction, and relapse. Fulfills marriage and family therapy and licensed professional clinical counselor licensure requirements.

CSP 688. Family Systems Assessment of Child Abuse (1)
Prerequisite: Counseling and School Psychology 601.
Examines child abuse assessment within individual, family, sociocultural, developmental and systemic frameworks. Treatment goals, issues and strategies derived from family systems therapies. Fulfills marriage and family therapy licensure requirement.

CSP 689. Family Counseling in the Schools (1)
Prerequisites: Counseling and School Psychology 600 and 600L.
Roles and approaches of family counselor in working with schools for children’s school-based problems. Family systems theory and practice applied to family-school interface, cultural interaction, specific symptomology, and professional and ethical issues.

CSP 691. Violence in Couples’ Relationships (1)
Prerequisite: Counseling and School Psychology 625.
Sociocultural, developmental, family and individual contexts of violence in couples’ relationships. Assessment with a focus on systemic ideas and practices. Legal, ethical, and person-of-the-therapist influences on assessment. Fulfills marriage and family therapy licensure requirement.

CSP 692. Seminar: Couples Therapy and Evidence-Based Relational Practices (3)
Prerequisites: Counseling and School Psychology 609, 625, 625L.
Explores and applies theory and practice of therapy with couples in premarital, marital, non-marital, divorce, recoupling, and remarriage situations. Intra and intercultural issues and gender factors in coupling. Discussion of specific problems such as infidelity or depression.
CSP 693. Special Topics in Families and Larger Social Systems (1)
Prerequisites: Counseling and School Psychology 625, 625L.
Variable topics addressing issues of relationships between families and larger social systems regarding marriage and family therapy. Examples include: home-based family therapy, immigrants and refugees in therapy, cultural trauma, larger systems change, spirituality, technology and therapy. May be repeated with new content. Maximum credit six units.

CSP 694. Psychopharmacology for Marriage and Family Therapists (2)
Prerequisite: Counseling and School Psychology 618.
Medical, cultural, systemic perspectives on use of psychopharmacology in marriage and family therapy practice. Overview of most commonly used drugs in psychotherapeutic treatment. Fulfills marriage and family therapy licensure requirement.

CSP 696. Selected Topics in Counseling and School Psychology (1-3)
Prerequisite: Consent of instructor.
Intensive study in specific areas of counseling and school psychology. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

CSP 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 740. Practicum (1-6) Cr/NC
Prerequisite: Counseling and School Psychology 601.
Supervised experience in counseling, school counseling, or school psychology. May be repeated with new content. See Class Schedule for specific content. Maximum credit nine units applicable to a master’s degree in counseling.

CSP 741. Practicum: Group Counseling (3) Cr/NC
Prerequisite: Counseling and School Psychology 670.
Supervised experience in group counseling and/or career planning. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree in counseling.

CSP 742. Policy, Politics, Law, and Ethics for School Counselors (1-3)
Prerequisite: Counseling and School Psychology 620.
Policies and politics influencing education, school counselors, and students. Legal mandates, ethical standards, practices of the school counseling profession, and how to apply to educational and counseling situations.

CSP 744. Cognitive Assessment - Intervention (3)
Prerequisites: Counseling and School Psychology 641 and 644.

CSP 745. Program Development and Evaluation in Pupil Services (3)
Prerequisites: Counseling and School Psychology 620, 730, and Education 690.
Development, management, and evaluation of pupil services in schools. Analysis of models and practice in planning.

CSP 746. Dynamic Assessment and Mediated Interventions (3)
Three hours of clinical practice.
Prerequisites: Counseling and School Psychology 610D and 744.

CSP 752. Seminar and Practicum: School Psychology (3-6) Cr/NC
Nine hours of practicum for three units.
Prerequisite: Counseling and School Psychology 730.
School psychology in multicultural school settings; implications for standard and innovative school psychology practices.

CSP 755. Practicum I: Marriage and Family Therapy (3) Cr/NC
Prerequisites: Counseling and School Psychology 625, 625L.
Supervised experience in relationship and family therapy under live supervision. Application of assessment methods and basic techniques. Clinical hours may be counted toward 500 clinical hours and marriage and family licensure eligibility requirement. May be repeated for additional clinical training experience. Maximum credit nine units applicable to a master’s or Ed.S. degree.

CSP 760. Advanced Seminar in School Psychology (3)
Prerequisites: Counseling and School Psychology 710A and 752.
Study of selected areas in school psychology which culminates in a written project with emphases on research, problems and/or issues. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree in counseling.

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 769. The Achievement Gap: Leadership, Advocacy, and Systemic Change (3)
Prerequisite: Counseling and School Psychology 620.
Leadership, advocacy, systemic change theory, practice to disaggregate data, identify equity, and access issues. Create student and systems interventions to target opportunity, attainment, and achievement gaps in schools.

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 775. ASCA Model I: Developing and Implementing a School Counseling Program (3)
Prerequisite: Counseling and School Psychology 620.
Part I of a two part sequence. Professional knowledge, skills, competencies, and abilities to create, implement, and evaluate school counseling program in K-12 schools. Program foundation, design, and implementation.

CSP 776. ASCA Model II: Evaluating and Improving School Counseling Programs (3)
Prerequisite: Counseling and School Psychology 620.
Part II of a two part sequence. Professional knowledge, skills, competencies, and abilities to create, implement, and evaluate school counseling program in K-12 schools. Program assessment, accountability, and evaluation.

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Counseling and School Psychology

CSP 780. Internship (2-12) Cr/NC
Prerequisite: Counseling and School Psychology 730.
Supervised internship experience in counseling or school psychology activities. Application to take the course must be made early during the preceding semester. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree. Maximum credit 24 units applicable to the specialization in school psychology.

CSP 785. Marriage and Family Therapy Traineeship (1-10) Cr/NC
Prerequisite: Counseling and School Psychology 755.
Community-based clinical marriage and family therapy experience, with AAMFT approved supervisor or equivalent. Individual and group supervision at site and on campus. Clinical hours may be counted toward 500 clinical hours and marriage and family therapy licensure eligibility requirement. May be repeated with new content. Maximum credit ten units.

CSP 798. Special Study (1-6) Cr/NC/RP
Prerequisite: Consent of staff, to be arranged with department chair and instructor.
Individual study. Maximum credit six units applicable to a master’s degree. May involve fieldwork.

CSP 799A. Thesis (3) Cr/NC/RP
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.
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 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

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. 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 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.
EDL 660. Field Experience in Educational Leadership (1-6) Cr/NC/RP
Prerequisite: Admission to Preliminary Administrative Services Credential program.
Supervised field experience in schools or other educational settings. Monthly sessions with university faculty. Application to take this course must be made during preceding semester. Maximum credit 10 units of which 4 units are applicable to a master’s degree. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 660.)

EDL 680. Seminar in PreK-12 Educational Administration (2-6) Cr/NC
Prerequisite: Consent of instructor.
Educational administration in preK-12 schools and school districts. Field experience when appropriate. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

EDL 696. Advanced Topics in Educational Leadership (1-3)
Intensive study in specific areas of educational leadership. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

EDL 707. Educational Law and Finance (3)
Prerequisites: Completion of a graduate degree and approval of department.
Legal and financial aspects of educational administration including implications for policy formulation in the areas of personnel, instruction, and resource management. (Formerly numbered Administration, Rehabilitation and Postsecondary Education 707.)

EDL 720. Human Resource Development in PreK-12 Educational Organizations (3)
Prerequisites: Completion of a graduate degree and approval of department.
Human resource management in preK-12 educational administration including selection and evaluation of staff, contract management, and staff development. Personnel managerial styles, staff leadership, and motivation techniques as to morale and productivity. Analysis of educational personnel systems and employee assistance programs.

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

EDL 760. Practicum in PreK-12 Educational Organizations (2-6) Cr/NC/RP
Prerequisite: Consent of instructor.
Internship for preK-12 educational administrators. Application to take this course must be made in the preceding semester by preregistration with the credential program coordinator. Released time may be required. May be repeated. Maximum credit 12 units applicable to the Professional Administrative Services Credential.

EDL 798. Special Study (1-6) Cr/NC/RP
Prerequisite: Consent of staff; to be arranged with department chair and instructor. May involve fieldwork.
Individual study. Maximum credit six units applicable to a master’s degree.

DOCTORAL COURSES

EDL 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 880. Seminar in Topics in Educational Leadership (3)
Prerequisite: Admission to educational leadership doctoral program.
Topical issues in field of educational leadership that have broad implications for research and practice in educational leadership. Maximum credit six units applicable to Ed.D. in educational leadership.

EDL 899. Doctoral Dissertation (1-15) Cr/NC/RP
(Offered only in the College of Extended Studies)
Prerequisites: Advancement to candidacy and an officially constituted dissertation committee.
Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved. No unit credit allowed toward advanced degree.
Educational Technology

In the College of Education

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http://go.sdsu.edu/education/edtec/index.aspx

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
Carla S. Mathison, 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
James Marshall, Ph.D., Assistant Professor of Educational Technology
Bernard J. Dodge, Ph.D., Professor of Educational Technology

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

UPPER DIVISION COURSES
EDTEC 532. Producing Digital Learning Media (1-3)
Two hours of activity per unit.
Digital learning media production for professionals in health, law, science, business, publishing, and other settings. Use of web- and video-based technologies, presentation, and data analysis tools for training and education. Not open to students in educational technology master's degree or certificate programs.

EDTEC 540. Educational Technology (3)
Six hours of activity.
Rationale, foundations, theories, careers, trends, and issues in educational technology. Implications of educational technology for instruction and information in schools, government, and corporations.

EDTEC 541. Educational Web Development (3)
One lecture and six hours of laboratory.
Prerequisite: Basic computer literacy. Systems, graphic design, and usability principles applied to design and development of web-based educational multimedia. Planning and prototyping digital media.

EDTEC 544. Instructional Design (3)
One lecture and six hours of laboratory.
Prerequisites: Educational Technology 540 and 541. 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 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. eLearning Design and Development (3)
Two lectures and three hours of laboratory.
Prerequisite: Educational Technology 544. 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 and development of individualized instruction delivered through e-learning; learning management systems; informal learning for corporate and museum education.

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 680. Evaluation Techniques for the Performance Technologist (3)
Two lectures and two 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. (Formerly numbered Educational Technology 590.)

EDTEC 684. Management of Educational Technology (3)
Six hours of activity.
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

OFFICE: Education and Business Administration 248
TELEPHONE: 619-594-5155 / FAX: 619-594-1183
http://coe.sdsu.edu/plc/current/credential/index.php

Faculty

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Karen Cadiero-Kaplan, Ph.D., Professor of Policy Studies in Language and Cross-Cultural Education (Graduate Adviser)
Alberto M. Ochoa, Ph.D., Professor of Policy Studies in Language and Cross-Cultural Education, Emeritus
Cristian Aquino-Sterling, Ph.D., Assistant Professor of Policy Studies in Language and Cross-Cultural Education
Elsa S. Billings, Ph.D., Assistant Professor of Policy Studies in Language and Cross-Cultural Education

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.

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/macrow level and in school contexts; analysis of bilingual and cross-cultural issues in cognition and literacy. (Formerly numbered Policy Studies in Language and Cross-Cultural Education 653.)

PLC 603. Community and Schools in a Diverse Society (3)
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 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.

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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 653. Language Development in K-12 Multilingual Classrooms (3)
Prerequisite: Admission to bilingual authorization credential program.
Dual language and multilingual classrooms, universals and differences in language structure, transfer, and use (including basic linguistics). First and additional language development; related factors (political/sociocultural aspects of bilingualism). Taught in English and Spanish. (Formerly numbered Policy Studies in Language and Cross-Cultural Education 953.)

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 910. Teaching Mathematics to Bilingual Students (1-3)
Prerequisite: Admission to Bilingual 2042 Multiple Subject credential program.
Underlying learning theories for teaching mathematical concepts, computation, and problem-solving skills to bilingual students.

PLC 911. Teaching Social Studies to Bilingual Students (1-3)
Prerequisite: Admission to Bilingual 2042 Multiple Subject credential program.
Conceptual approaches for teaching bilingual social studies curriculum, incorporating sociocultural characteristics of multicultural community, social concepts, and community social issues.

PLC 912. Teaching Science to Bilingual Students (1-3)
Prerequisite: Admission to Bilingual 2042 Multiple Subject credential program.
Strategies for development of process skills and concept acquisition. Methodology for teaching activity-oriented science class bilingually.

PLC 915. Teaching and Learning in the Content Area: English Language Development/SDAIE (1-3)
Prerequisites: Education 451, Policy Studies in Language and Cross-Cultural Education 515, and admission to Bilingual 2042 Single Subject credential program.
Teaching strategies in content specific fields from second language acquisition perspective taken concurrently with student teaching. See Class Schedule for specific content. May be repeated with new content. (Formerly numbered Policy Studies in Language and Cross-Cultural Education 914.)

A. Multiple Subjects
B. Single Subjects
C. Special Education

PLC 931. Skills in Teaching Reading to Bilingual Elementary Students (1-3)
Prerequisite: Admission to Bilingual 2042 Multiple Subject credential program.
Teaching reading in English, including methods, strategies, assessment, materials, and techniques of transition for implementing reading programs in the bilingual classroom.

PLC 933. Skills in Teaching Reading to Bilingual Secondary Students (3)
Prerequisites: Upper division standing. Admission to Bilingual 2042 Single Subject credential program.
Methods for developing reading skills in Spanish and English across subject areas. Includes comprehension, academic vocabulary, concept development, reading strategies, and assessment. Taught in Spanish and/or English.

PLC 954. Classroom Organization for Democratic Teaching in Bilingual Classrooms (1)
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.
Teaching practices to include democratic processes for classroom management in bilingual classrooms. Classroom teaching, classroom discipline, and curriculum management. Social-cultural and political contexts of teaching to include overview of teacher performance assessment tasks.

PLC 960. Professional Seminar for Bilingual Teacher Candidates (1-4) Cr/NC
Prerequisite: Policy Studies in Language and Cross-Cultural Education 954.
Lesson planning and organization for bilingual elementary and secondary teacher candidates. Meeting needs of diverse learners in bilinguality settings. Maximum credit eight units.

PLC 961. Practicum in Elementary Bilingual Classroom (1-12) Cr/NC
Prerequisites: Admission to Bilingual 2042 Multiple Subject credential program. Student must provide own transportation to student teaching site.
On-site, part-time experience to implement bilingual teacher candidates. Meeting needs of diverse learners in a bilingual classroom. 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. Practicum in Secondary Bilingual Classroom (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 (8-12) Cr/NC
Prerequisites: Policy Studies in Language and Cross-Cultural Education 524 and 963. Students must provide own transportation to student teaching site.
On-site, full-day experience in State approved bilingual and nonbilingual classroom. 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
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Chair of Department
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and Associate Dean in the College of Education
Regina Brandon, Ph.D., Associate Professor of Special Education
John R. Johnson, Ph.D., Associate Professor of Special Education
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Angela S. McIntosh, Ph.D., Associate Professor of Special Education
Yasemin Turan Qian, Ph.D., Associate Professor of Special Education

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

UPPER DIVISION COURSES

SPED 500. Human Exceptionality (3)
Historical, philosophical, and legal aspects of special education that affect identification and programming for diverse learners with exceptionalities. Characteristics of individuals with special needs and implications for adapting living and learning environments. Meets special education mainstreaming requirement for all basic teaching credentials.

SPED 501. Typical and Atypical Learning Processes (3)
Prerequisite: 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: Admission to credential program.
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)
Prerequisite: Admission to credential program.
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)
Prerequisite: Admission to credential program.
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: Admission to credential program.
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 (2)**
- 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 learning, 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 990.
- Advanced adaptations in curriculum and instruction in content areas, study skills, organizational strategies, and social and transition skills. English-as-a-second language approaches for students with disabilities. Research and practices related to linguistic, cultural, and ability differences.

**SPED 649. Curriculum Models for Students Who Are Gifted and Talented (3)**
- Prerequisite: Credit or concurrent registration in Special Education 534.
- Theory, research, and practice in curriculum design and program implementation for developing high potential.

**SPED 650. Special Topics in Special Education (1-4)**
- Prerequisites: Special Education 500, 501.
- Instructional sequences (mini-courses) focusing on a single topic or competency dealing with special education. Topics differ each semester to adjust to current literature in the field, training needs, and resource availability. Maximum combined credit of nine units for Special Education 650A, 650B, 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 (3)**
- 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, learning 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.

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.
In the College of Education

Education and Business Administration 255
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Faculty
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Interim Associate Dean for Faculty Development, Research,
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André J. Branch, Ph.D., Associate Professor of Teacher Education

Marva Cappello, Ph.D., Associate Professor of Teacher Education

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Meredith E. Houle, Ph.D., Assistant Professor of Teacher Education

Courses Acceptable on Master's Degree

Instructor.

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

* Specified sections.
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; valid teaching credential.
Trends in reading instruction to include developmental sequences in reading skills and abilities, reading in the content fields, individual differences and interests.

TE 631. Seminar in Language Arts (3)
Advanced study of problems in teaching language arts. The study of the scientific research and application in the field.

TE 633. Leadership in Literacy Education (3)
Prerequisite: Teacher Education 637.
Supervised teaching experience utilizing instructional 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 ability and the use of various assessment techniques.

TE 636. Advanced Assessment of Reading and Language Arts (3)
Prerequisites: Credit or concurrent registration in Teacher Education 635; valid teaching credential; course in methods and materials for teaching reading, acquisition and assessment of personal literacy as supported throughout an individual’s lifetime; supervised experience using assessment materials. Advanced formal and informal literacy measures.

TE 637. Instructional Strategies for Reading and Language Arts (4)
Three lectures and two hours of activity.
Prerequisites: Valid teaching credential; course in methods, materials for teaching reading.
Supervised teaching experience utilizing instructional activities in individual and small group settings.

TE 638. Topics in Reading Education (1-6)
Prerequisite: California Teaching Credential.
A variety of instructional sequences (mini-courses), each focusing on a single topic or competency dealing with reading instruction. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

TE 639. Literacy and Language (3)
Prerequisite: Teacher Education 930 or 933.
Theories of literacy and methods for developing literacy in language, reading and writing. Instructional methods and assessment techniques for children and adults.

TE 640. Planning for Teaching and Assessment in Writing (3)
Prerequisite: Teaching experience.
Comprehensive writing instruction in context of the interactive language arts. Development of plans for curriculum and instruction in diverse classrooms. Examination of multiple assessments and how they inform instruction in K-12 classrooms.

TE 646. Seminar in Educational Measurement (3)
Problems in educational testing. Emphasis on construction, administration and validation of teacher-made tests.

TE 651. History of Social Studies Reform (3)
Prerequisite: Graduate standing.
History and current status of social studies curricula in American schools, K-12. Emphasis on issues, controversies, competing philosophies, historical trends, and applications.

TE 652. Change in Education (3)
Prerequisite: Valid teaching credential.
Examination of the process of change in education, analysis of recent major changes and study of techniques for effecting change.

TE 654. Issues in Social Studies Education (3)
Prerequisite: Graduate standing.
Issues of theory, research, and practice in social studies including dilemmas of social studies definition and purpose, theory and research in teaching history and social sciences; teachers, texts, and classroom discourse; technology; recent reform efforts; classroom applications.

TE 655. Sociocultural Foundations of American Education (2 or 3)
Prerequisite: Admission to teacher education.
Theoretical and practical foundations of American schools as it relates to equity, pedagogy, and curriculum. Issues of equity, race, culture, gender, ethnicity, sexual preference, and social issues as they impact the classroom.

TE 660. Early Literacy and Early Intervention in Reading Recovery® (3)
Prerequisites: Admission to reading recovery program and concurrent registration in Teacher Education 662 and 664.
Theoretical foundations underlying various aspects of reading and writing processes, early reading difficulties, oral language development and acquisition, early research and subsequent development of reading recovery.

TE 661. Theoretical Foundations of Literacy, Language, and Learning in Reading Recovery® (3)
Prerequisites: Admission to reading recovery program and concurrent registration in Teacher Education 663 and 665.
Theories about teaching and learning, reading and writing process, language development, comprehension, issues of literacy and culture, phonemic and phonological awareness, and Clay’s theory.

TE 662. Clinical Foundations of Reading Recovery® I (3)
Prerequisites: Admission to reading recovery program and concurrent registration in Teacher Education 660 and 664.
Develop expertise assessing and observing children, develop expertise in teaching children at risk of reading failure, and examine teacher leader role as teacher of reading recovery teachers.

TE 663. Clinical Foundations of Reading Recovery® II (3)
Prerequisites: Admission to reading recovery program, Teacher Education 662, and concurrent registration in Teacher Education 661 and 665.
Refinement of reading recovery teaching procedures based on theory and examination of teacher leader role as it pertains to teaching reading recovery teachers-in-training.

TE 664. Practicum in Leadership for Reading Recovery® Teacher Leaders I (3)
Prerequisites: Admission to reading recovery program and concurrent registration in Teacher Education 660 and 664.
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.
Teacher Education

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 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 709. Inclusive Education (3)
One lecture and four hours of activity.
Prerequisite: Graduate standing.
Research, theory, and practice of inclusive education to include examination of the politics of disability in the public schools and American society.

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.

TE 910B. Teaching Social Studies in the Elementary School (1-3)
Prerequisite: Admission to multiple subject credential program or possession of a teaching credential.
Developing curriculum, principles and materials of instruction, including instructional media and participation in elementary social studies education.

TE 910C. Teaching Science in the Elementary School (1-3)
Prerequisite: Admission to multiple subject credential program or possession of a teaching credential.
Developing research-based science curriculum, principles and materials of instruction, including instructional media and participation in elementary science education.

TE 914. Teaching and Learning in the Content Area: Major (3)
Prerequisite: Admission to teacher education credential program.
Teaching strategies in content specific fields of study taken concurrently with student teaching. May be repeated with new content. See Class Schedule for specific content.

TE 922. Behavioral and Psychological Aspects of Teaching (1-4)
Prerequisites: Admission to single subject credential program. To be taken concurrently with Teacher Education 954 and 963.
Teacher competencies as they relate to learning theories, adolescent growth, self-assessment, measurement and evaluation. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

TE 923. Psychological Foundations of Education (1-3)
Prerequisites: Psychology 101 and admission to multiple subject credential program.
Implementing learning process through interactive skills, using instructional principles to facilitate learning and changes in behavior and techniques used in assessing instruction and pupil growth.

TE 930. Teaching Reading and Language Arts in the Elementary School (1-6)
Prerequisite: Admission to multiple subject credential program, education specialist credential program, or possession of a teaching credential.
Selecting, designing, and evaluating appropriate learning experiences to assure children's growth in reading and language arts. Includes nature of reading and language arts as a human behavior, various approaches, materials, and techniques used in teaching reading and language arts. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

TE 933. Teaching of Reading in the Secondary School (3)
Teacher competencies as they relate to the teaching of reading/writing and diagnosing needs in the content areas. For students completing a credential at SDSU, this course must be taken concurrently with enrolment in first or second semester single subject credential program.

TE 954. Humanistic and Social Aspects of Teaching (1-4)
Prerequisites: Admission to single subject credential program and concurrent registration in Teacher Education 922 and 963.
Teacher competencies as they relate to values, awareness, self-concept, rights and responsibilities. May be repeated with new content. See Class Schedule for specific content. Maximum credit four units.

TE 960. Basic Student Teaching Seminar (1-2) Cr/NC
Prerequisites: Admission to multiple subject credential program and concurrent registration in Teacher Education 965.
Discussion of immediate problems in student teaching with emphasis on children's growth and development.

TE 961. Advanced Student Teaching Seminar (1-2) Cr/NC
Prerequisites: Satisfactory completion of Teacher Education 960, 965; and concurrent registration in Teacher Education 966.
Discussion of immediate problems in student teaching with emphasis on the influence of philosophical, social and cultural factors on learning.
TE 963. Secondary School Student Teaching I (1-6) Cr/NC/RP
Prerequisites: Admission to single subject credential program. To be taken concurrently with Teacher Education 922 and 954. Teacher Education 933 is highly recommended to be taken at this time. Student must provide own transportation to student teaching site. On-site, part-time experience to implement teacher competencies developed in Teacher Education 922 and 954. Maximum credit six units.

TE 964. Secondary School Student Teaching II (1-12) Cr/NC/RP
Prerequisites: Teacher Education 922, 933, 954, 963. To be taken concurrently with Teacher Education 903. Student must provide own transportation to student teaching site. On-site, full-day experience to implement teacher competencies as developed from the total professional sequence. Maximum credit 12 units.

TE 965. Basic Student Teaching in Elementary Schools (1-12) Cr/NC/RP
Prerequisites: Admission to multiple subject credential program and concurrent registration in Teacher Education 960. Day-to-day teaching experiences including selected instructional activities for which a teacher in a classroom is normally responsible.

TE 966. Advanced Student Teaching in Elementary Schools (1-12) Cr/NC/RP
Prerequisites: Satisfactory completion of Teacher Education 960, 965, and concurrent registration in Teacher Education 961. Teaching experiences including all the instructional activities for which a teacher in a classroom is normally responsible.

TE 967. Elementary School Student Teaching (15) Cr/NC (Offered only at IVC)
Prerequisites: Admission to multiple subject credential program and concurrent registration in Teacher Education 960 and 961. On-site, full-day teaching experiences. Two consecutive eight week assignments at two different broad levels of schooling. Each eight week assignment will provide typical responsibilities of teachers through a graduated series of experiences, such as class preparation, instruction of students, maintaining accurate student records, attending faculty meetings and parent conferences.

TE 968. Secondary School Student Teaching (15) Cr/NC (Offered only at IVC)
Prerequisites: Admission to single subject credential program and concurrent registration in Teacher Education 903. On-site, full-day teaching experiences. Two consecutive eight week assignments in single subject content area; one in junior high school and one in senior high school. Each eight week assignment will provide typical responsibilities of teachers through a graduated series of experiences, such as class preparation, instruction of students, maintaining accurate student records, attending faculty meetings and parent conferences.

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

OFFICE: Engineering 203
TELEPHONE: 619-594-6061
E-MAIL: info@engineering.sdsu.edu

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 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:
Dr. Satchi Venkataraman, Graduate Adviser
Department of Aerospace Engineering
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. At least six units must be taken in the Aerospace Engineering 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

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)
   A E 600 Seminar (1-3)
   A E 611 Vibration of Elastic Solids (3)
   A E 621 Theory of Elasticity (3)
   A E 641 Structural Optimization (3)
   A E 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 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) Design (3)</td>
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<tr>
<td>E E 685</td>
<td>and Applications (3)</td>
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Biomechanics

(Major Code: 09051) (SIMS Code: 446002)

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<tr>
<td>BIOL 585</td>
<td>Cellular and Molecular Immunology (3)</td>
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<tr>
<td>M E 540</td>
<td>Nonmetallic Materials (3)</td>
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<tr>
<td>M E 685/</td>
<td>Micro-Electro-Mechanical Systems (MEMS) Design (3)</td>
</tr>
<tr>
<td>E E 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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Electives:

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<tr>
<td>A E 601</td>
<td>Computational Fluid Dynamics (3)</td>
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<tr>
<td>A E 621</td>
<td>Theory of Elasticity (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 (3)</td>
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<td>CHEM 712</td>
<td>Chemical Kinetics (3)</td>
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<td>CHEM 751</td>
<td>Separations Science (3)</td>
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<td>E E 502</td>
<td>Electronic Devices for Rehabilitation (3)</td>
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<td>E E 503</td>
<td>Biomedical Instrumentation (3)</td>
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<td>ENS 610</td>
<td>Biomechanics: Measurement Techniques I-Kinematics (3)</td>
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<td>Biomechanics: Measurement Techniques III-EMG (3)</td>
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<td>ENS 613</td>
<td>Motor Control and Rehabilitation Science (3)</td>
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<td>ENV E 554</td>
<td>Process Fundamentals of Environmental Systems (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>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>M E 681</td>
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<tr>
<td>PHYS 670B</td>
<td>Medical Physics II (3)</td>
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Bioengineering
BS/MS 4 + 1 Degree Program
(Major Code: 09051) (SIMS Code: 446005)

The BS/MS 4 + 1 degree program is for SDSU mechanical engineering students who wish to specialize in bioengineering prior to employment in industry, government, or as preparation for further training. Students must complete 160 units to be simultaneously awarded the B.S. degree in mechanical engineering and the M.S. degree in bioengineering. Students can apply for admission to the BS/ MS 4 + 1 degree program when they have successfully completed a minimum of 90 units or a maximum of 115 units. These units must count towards one or the other of the two SDSU degree programs (BS or MS) that will ultimately be awarded in the dual degree program. All students must have a satisfactory score (minimum of 950 for combined verbal and quantitative) on the Graduate Record Examination (GRE) General Test and a minimum overall GPA of 3.0.

To satisfy the requirements for the BS/MS 4 + 1 degree program, students must achieve at least a 3.0 average in the 30 units of courses used to satisfy the graduate program of study. Of the 30 units, a maximum of nine units may be in 500-numbered mechanical engineering electives and all other program requirements must be satisfied. For the BS/MS 4 + 1 degree program, students must take M E 502, 580, and 585 for the biomechanics specialization; M E 502 or 580, 540 or 543, and 585 for the biomaterials specialization. The bioinstrumentation specialization is not open to students in the BS/MS 4 + 1 degree program. Upon successful completion of the BS/MS 4 + 1 degree program, students will receive the B.S. degree in mechanical engineering and M.S. degree in bioengineering.

Civil Engineering
(Major Code: 09081) (SIMS Code: 442001)

General information: The Department of Civil, Construction, and Environmental Engineering offers graduate study leading to the Master of Science degree in civil engineering. Available areas of study include a concentration in environmental engineering and specializations in construction engineering, geotechnical engineering, structural engineering, transportation engineering, and water resources engineering. Programs of study may also include combinations of the above areas and related courses from other disciplines subject to the approval of the graduate adviser. Selected students in the program may be offered graduate teaching associateships. Experience as a graduate teaching associate can help prepare students for part-time or full-time teaching careers.

Applicants with a bachelor’s degree in an approved non-engineering curriculum must make up the deficiencies in biology, calculus, chemistry, computer skills, differential equations, fluid mechanics and hydraulics, physics, statics and dynamics, statistics, and thermodynamics, as determined by the graduate adviser.

The following materials should be mailed or delivered to:
Dr. Temesgen Garoma Ararsso, 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 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 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 647 Physical and Chemical Processes of Water Pollution Control (3)
ENV E 648 Biological Processes and Bioremediation Engineering (3)

Prescribed Electives (six units):
ENV E 556 Air Pollution Engineering (3)
ENV E 558 Solid and Hazardous Waste Engineering (3)
ENV E 637 Process Design for Industrial and Hazardous Waste Treatment (3)
ENV E 797 Independent Research (1-3) Cr/NC/PR
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. Twelve units in one area of specialization (designated as Group A, B, C, or D), with no more than six units of 500-level courses.
   b. Non-thesis students: Three units of M E 797 and six units of 500-, 600-, or 700-level courses from mechanical engineering.
3. The total number of units from 500-level courses should not exceed nine.

Group A: Design and Manufacturing
(Major Code: 09101) (SIMS Code: 447071)

M E 502 Continuum Mechanics (3)
M E 514 Advanced Machine Design (3)
M E 543 Powder-Based Manufacturing (3)
M E 555 Energy and Thermal Systems Analysis and Design (3)
M E 580 Biomechanics (3)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>M E 585</td>
<td>Fundamentals of Micro-Electro-Mechanical Systems (MEMS) (3)</td>
<td></td>
</tr>
<tr>
<td>M E 596</td>
<td>Advanced Mechanical Engineering Topics (related to Design and Manufacturing) (3)</td>
<td></td>
</tr>
<tr>
<td>M E 610</td>
<td>Finite Element Methods in Mechanical Engineering (3)</td>
<td></td>
</tr>
<tr>
<td>M E 645</td>
<td>Mechanical Behavior of Engineering Materials (3)</td>
<td></td>
</tr>
<tr>
<td>M E 646</td>
<td>Mechanics of Sintering (3)</td>
<td></td>
</tr>
<tr>
<td>M E 683</td>
<td>Design of Medical Devices (3)</td>
<td></td>
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<tr>
<td>M E 685/</td>
<td>Micro-Electro-Mechanical Systems (MEMS)</td>
<td></td>
</tr>
<tr>
<td>E E 685</td>
<td>Design and Applications (3)</td>
<td></td>
</tr>
<tr>
<td>M E 696</td>
<td>Advanced Topics in Mechanical Engineering (related to Design and Manufacturing) (3)</td>
<td></td>
</tr>
<tr>
<td>A E 621</td>
<td>Theory of Elasticity (3)</td>
<td></td>
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<tr>
<td>A E 641</td>
<td>Structural Optimization (3)</td>
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</tbody>
</table>

**Group B: Dynamics and Control** *(Major Code: 09101) (SIMS Code: 447072)*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>M E 520</td>
<td>Introduction to Mechanical Vibrations (3)</td>
<td></td>
</tr>
<tr>
<td>M E 530</td>
<td>Automatic Control Systems (3)</td>
<td></td>
</tr>
<tr>
<td>M E 596</td>
<td>Advanced Mechanical Engineering Topics (related to Dynamics and Control) (3)</td>
<td></td>
</tr>
<tr>
<td>M E 696</td>
<td>Advanced Topics in Mechanical Engineering (related to Dynamics and Control) (3)</td>
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</tbody>
</table>

**Group C: Energy and Thermofluids** *(Major Code: 09101) (SIMS Code: 447073)*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>M E 555</td>
<td>Energy and Thermal Systems Analysis and Design (3)</td>
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<tr>
<td>M E 556</td>
<td>Solar Energy Conversion (3)</td>
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<tr>
<td>M E 596</td>
<td>Advanced Mechanical Engineering Topics (related to Energy and Thermofluids) (3)</td>
<td></td>
</tr>
<tr>
<td>M E 651</td>
<td>Advanced Thermodynamics (3)</td>
<td></td>
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<tr>
<td>M E 653</td>
<td>Combustion (3)</td>
<td></td>
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<tr>
<td>M E 656</td>
<td>Conduction Heat and Transfer (3)</td>
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<tr>
<td>M E 657</td>
<td>Convection Heat Transfer (3)</td>
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<tr>
<td>M E 658</td>
<td>Radiation Heat Transfer (3)</td>
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<tr>
<td>M E 661</td>
<td>Gas Dynamics (3)</td>
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<tr>
<td>M E 696</td>
<td>Advanced Topics in Mechanical Engineering (related to Energy and Thermofluids) (3)</td>
<td></td>
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<tr>
<td>A E 601</td>
<td>Computational Fluid Mechanics (3)</td>
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<tr>
<td>A E 612</td>
<td>Compressible Fluid Flow (3)</td>
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<tr>
<td>A E 644</td>
<td>Turbulent Flow (3)</td>
<td></td>
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</tbody>
</table>

**Group D: Materials and Mechanics** *(Major Code: 09101) (SIMS Code: 447074)*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>M E 502</td>
<td>Continuum Mechanics (3)</td>
<td></td>
</tr>
<tr>
<td>M E 520</td>
<td>Introduction to Mechanical Vibrations (3)</td>
<td></td>
</tr>
<tr>
<td>M E 540</td>
<td>Nonmetallic Materials (3)</td>
<td></td>
</tr>
<tr>
<td>M E 543</td>
<td>Powder-Based Manufacturing (3)</td>
<td></td>
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<tr>
<td>M E 580</td>
<td>Biomaterials (3)</td>
<td></td>
</tr>
<tr>
<td>M E 596</td>
<td>Advanced Mechanical Engineering Topics (related to Materials and Mechanics) (3)</td>
<td></td>
</tr>
<tr>
<td>M E 610</td>
<td>Finite Element Methods in Mechanical Engineering (3)</td>
<td></td>
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<tr>
<td>M E 645</td>
<td>Mechanical Behavior of Engineering Materials (3)</td>
<td></td>
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<tr>
<td>M E 646</td>
<td>Mechanics of Sintering (3)</td>
<td></td>
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<tr>
<td>M E 681</td>
<td>Biomaterials (3)</td>
<td></td>
</tr>
<tr>
<td>M E 696</td>
<td>Advanced Topics in Mechanical Engineering (related to Materials and Mechanics) (3)</td>
<td></td>
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<tr>
<td>A E 621</td>
<td>Theory of Elasticity (3)</td>
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<tr>
<td>A E 641</td>
<td>Structural Optimization (3)</td>
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</table>

### Mechanical Engineering BS/MS 4 + 1 Degree Program
*(Major Code: 09101)*

The BS/MS 4 + 1 degree program is for SDSU mechanical engineering students who wish to gain expertise in a specialization of mechanical engineering prior to employment in industry, government, or as preparation for further training. Students must complete 160 units to be simultaneously awarded the B.S. degree in mechanical engineering and the M.S. degree in mechanical engineering. Students can apply for admission to the BS/MS 4 + 1 degree program when they have successfully completed a minimum of 90 units or a maximum of 115 units. These units must count towards one or the other of the two SDSU degree programs (BS or MS) that will ultimately be awarded in the dual degree program. All students must have a satisfactory score (minimum of 950 for combined verbal and quantitative) on the Graduate Record Examination (GRE) General Test and a minimum overall GPA of 3.0.

To satisfy the requirements for the BS/MS 4 + 1 degree program, students must achieve at least a 3.0 average in the 30 units of courses used to satisfy the graduate program of study. Of the 30 units, a maximum of nine units may be in 500-level mechanical engineering electives and all other program requirements must be satisfied. The BS/MS 4 + 1 degree program allows students to use any three 500-level mechanical engineering courses toward their graduate degree. Students in the BS/MS 4 + 1 degree program must follow the thesis option. Upon successful completion of the BS/MS 4 + 1 degree program, students will receive the B.S. degree in mechanical engineering and M.S. degree in mechanical engineering.

### Master of Engineering Degree
*(Major Code: 09134) (SIMS Code: 444050)*

#### General Information

The Master of Engineering degree is a practice-oriented, interdisciplinary degree designed to meet the needs of students who are interested in furthering a career in engineering with a business/management emphasis. The student will select his/her own program in consultation with the program adviser of the respective department subject to the guidelines listed below. In addition to the course requirements, the student is required to complete a design project and a final written report. This phase of the program introduces the student to the problems and solutions faced by practicing engineers. The program is designed for both the industrial professional who is seeking a career enhancement and also to the new baccalaureate graduate who wants to continue to study in order to be able to enter the work force with well-defined and honed professional skills.

This program is administered by the graduate adviser. The faculty responsible for directing this program are:

- Dr. Kenneth D. Walsh, Professor and Chair, Department of Civil, Construction, and Environmental Engineering
- 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. Nagy Nosseir, Professor and Chair, Department of Aerospace Engineering

In addition to sending materials to Graduate Admissions, the following should also be mailed or delivered to:

- Dr. Gordon Lee, Graduate Adviser
- Master of Engineering Program
- College of Engineering
- San Diego State University
- 5500 Campanile Drive
- San Diego, CA 92182-1326

1. Personal statement of graduate program goals;
2. Letters of recommendation (optional).
Admission to Graduate Study

All students must satisfy the general requirements for admission to the Division of Graduate Affairs with classified graduate standing as described in Part Two of this bulletin. Candidates must have attained an undergraduate grade point average of at least 2.85 (4 point scale) in the last 60 semester (90 quarter hours) of technical study. In addition, applicants must have a bachelor's degree in engineering or a closely related discipline. If undergraduate preparation is deemed insufficient, the student will be required to take specified undergraduate courses to remove this deficiency. Such courses may be in addition to the 36 units required. Admission to the program will be limited to applicants whose background, interest, and expertise are consistent with the demands of the design projects.

Specific Requirements for Master of Engineering Degree

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Four of this bulletin. The student must also complete a graduate program of 36 units to include 18 units of graduate engineering courses, 12 units of graduate business courses, and six units of project registered under Engineering 798. The courses in engineering and business administration are selected in consultation with the graduate adviser. With the consent of the adviser, one unit of 798, with appropriate content, may be substituted for one unit in business administration. No more than a total of seven units of 798 will be accepted for credit towards the degree.

The industry-oriented design project is to be selected in cooperation with the graduate adviser in the area of interest. Typically, the students take this project at the end of the program of study as a culminating experience integrating engineering and business knowledge attained through coursework and experience. A formal written report of project findings will be submitted and approved by a committee of two engineering faculty members and one faculty member from business administration.

Program Administration

San Diego State University:
Program Director: Eugene A. Olevsky
University of California, San Diego:
Program Director: Enrique Luco

Financial Support

Students admitted to the program will be eligible for teaching associations and graduate assistantships. It is the policy of SDSU College of Engineering to support doctoral students during their entire tenure as long as they are in good standing, are making satisfactory progress toward their degree, and are in residence at one of the two institutions.

For further information, the student should write to the director of the Engineering Sciences Joint Doctoral Program at the College of Engineering, San Diego State University, San Diego, CA 92182-1326.

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](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
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:

Committee Members, Electrical and Computer Engineering:
M. Gupta, F. Harris, S. Kumar, S. Nagaraj, M. Sarkar, S. Sharma.

Committee Members, Structural Engineering:
University of California, San Diego:

Program Director: Enrique Luco

Committee Members, Mechanical and Aerospace Engineering:
R. Bitmead, J. Goddard, S. Krasheninnkov, X. Markenscoff,
J. McKittrick, M. Meyers, C. Pozrikidis, J. Talbot, F. Williams
(Mechanical and Aerospace Engineering).

Committee Members, Bioengineering:
J. Hasty, M. Heller, A. McCulloch, R. Sah, J. Watson.

Committee Members, Electrical and Computer Engineering:
P. Asbeck, P. Cosman, R. Cruz, T. Javidi, L. Larson, B. Rao,

Committee Members, Structural Engineering:

Rehabilitation Technology Certificate
(Certificate Code: 15011) (SIMS Code: 444070)

The purpose of this certificate is to train interested engineers and non-engineers in the field of rehabilitation technology using formal classroom instruction, project design and fabrication, and internship. Enrollment in this certificate program will provide interested engineering students exposure to rehabilitation technology. For non-engineering rehabilitation professionals (e.g., vocational rehabilitation counselors, special education teachers, transition and supported employment specialists), the certificate program will provide specialty training in the application of rehabilitation technology. Specifically, the certificate program will do the following:

1. Expose graduate engineering students to the problems and promises of rehabilitation engineering as a field of specialization.
2. Provide a number of interrelated training activities that will improve the professional competence of employed rehabilitation workers.
3. Provide opportunities for extensive training, in the form of extended internships with knowledgeable rehabilitation professionals whose backgrounds are in such specializations as biomechanics, physical and occupational therapy, prosthetics and orthotics, rehabilitation counseling, rehabilitation electronics, rehabilitation engineering, special education, speech, language, and hearing sciences, etc.
4. Offer both formal classroom instruction and guided problem solving opportunities in designing, building, customizing, and delivering rehabilitation technology for enhancing the integration of individuals with disabilities into school, residential, community, and employment settings.

This is an advanced trans-disciplinary academic certificate at the postbaccalaureate level. Admission requirements include a bachelor’s degree in engineering, rehabilitation, or special education, or a related allied health field. Students admitted into the program must maintain a minimum grade point average of 3.0 in all certificate coursework with no less than a grade of C in all courses. Depending on the background and work experience, students may be required to remove deficiencies through additional coursework as part of the certificate requirements.

Students in the certificate program will complete 12 units of formal coursework and one semester of internships as described below unless alternative courses are approved by the program advisers. Electrical Engineering 502 (Electronic Devices for Rehabilitation - 3 units) will acquaint students with the design and application of electronic devices used in rehabilitation; explain the problems of the disabled; and present possible solutions for some of their needs. This is a non-traditional and practical electrical engineering course that requires student involvement in the collaborative assessment (with students in Speech, Language, and Hearing Sciences 676) of disabled persons for their cognitive, communicative, and physical abilities at the SDSU Communications Clinic.

Administration, Rehabilitation and Postsecondary Education 607 (Applications of Rehabilitation Technology - 3 units) will provide an overview of assistive technology in the areas of assessment, accessibility, mobility, communication, employment, and more. Students will collaborate on transdisciplinary teams to design and construct an adaptation or modification which will enable a person with disabilities to participate more fully in school, work and/or community environments.

Administration, Rehabilitation and Postsecondary Education 685A or 685B (Medical and Psychological Aspects of Disability - 3 units) will cover the impact of different disabilities (e.g. visual and sensory impairments, orthopedic impairments, burns, amputation, chronic pain, cancer, developmental and learning disabilities, traumatic brain injuries, and spinal cord injuries) in terms of functional limitations, rehabilitative services needed, and environmental adjustments required.

Electrical Engineering 798 (Special Study in Rehabilitation Technology Design - 3 units) will provide students hands-on opportunities to work with rehabilitation professionals, occupational and physical therapists, and other non-engineers on technology teams in the design and fabrication of customized adaptations for persons with disabilities.

Internships (one semester) will provide guided field experience through placement with knowledgeable practicing rehabilitation professionals in settings as the Sharp Rehabilitation Center, Assistive Device Assessment Program within the SDSU Communications Clinic-Alvarado, Access Center of San Diego, and San Diego schools.

For application and additional information, contact the program adviser Dr. Andrew Szeto in the Department of Electrical and Computer Engineering or Dr. Caren L. Sax in the Department of Administration, Rehabilitation and Postsecondary Education.

Courses Acceptable on Master’s and Doctoral Degree Programs in Engineering (ENGR)

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

GRADUATE COURSES

NOTE: In addition to the courses listed below, a number of other graduate level courses are acceptable for the doctoral degree. For a description of these courses, see individual department listings (e.g., aerospace, civil, construction, and environmental, or mechanical), and contact the director of the doctoral program.

ENGR 795. Internship/Practicum (1) Cr/NC
Prerequisites: Twenty-seven units of graduate level coursework in the Master of Engineering program and consent of graduate adviser.
Supervised internship or practicum experience with approval of graduate adviser. Not applicable to an advanced degree. Maximum credit three units.

ENGR 797. Research (1-3) Cr/NC/RP
Prerequisite: Consent of instructor.
Research in engineering. Maximum credit six units applicable to a master’s degree.

ENGR 798. Special Study (1-6) Cr/NC
Prerequisites: Graduate standing and consent of Associate Dean of College of Engineering.
Individual study. Maximum credit six units applicable to Master of Engineering degree.
ENGR 799A. Project (3) Cr/NC/RP  
Prerequisites: An officially appointed project committee and advancement to candidacy.  
Preparation of a project for the master’s degree.

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.
Faculty

Nagy S. Nosseir, Ph.D., Professor of Aerospace Engineering, Chair of Department
Joseph Katz, D.Sc., Professor of Aerospace Engineering
Balbir S. Narang, Ph.D., Professor of Aerospace Engineering
Luciano Demasi, Ph.D., Associate Professor of Aerospace Engineering
Gustaf Jacobs, Ph.D., Associate Professor of Aerospace Engineering
Satchi Venkataraman, Ph.D., Associate Professor of Aerospace Engineering (Graduate Adviser)

Courses Acceptable on Master's Degree

Programs in Aerospace Engineering (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.

GRADUATE COURSES

A E 510. Finite Element Methods in Aerospace Structures (3)
Prerequisite: Aerospace Engineering 410.
Static and dynamic analysis of aerospace structures utilizing finite element methods. (Formerly numbered Engineering Mechanics 510.)

A E 515. Methods of Analysis (3)
Prerequisite: Aerospace Engineering 280 with minimum grade of C.
Selected topics from vector calculus, partial differential equations, and complex analysis, with engineering applications. (Formerly numbered Engineering 510.)

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 535. Composite Structural Analysis (3)
Prerequisites: Aerospace Engineering 280 and Civil Engineering 301 (or Mechanical Engineering 304).
Strength of composite materials; lamination theory; strength analysis of laminates; bending, buckling, and vibration of composite plates. (Formerly numbered Engineering Mechanics 530.)

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 Aerospace Engineering 340, and Aerospace Engineering 515.

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 496, 499, and 596 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES

A E 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. (Formerly numbered Engineering Mechanics 600.)

A E 601. Computational Fluid Mechanics (3)
Prerequisites: Credit or concurrent registration in Aerospace Engineering 302 and Aerospace Engineering 515.
Finite difference method of solving general fluid mechanics problems. Study of stability, convergence, compatibility, dissipation, and dispersion. A project is required.

A E 611. Vibration of Elastic Solids (3)
Prerequisites: Aerospace Engineering 410 and Aerospace Engineering 515 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. (Formerly numbered Engineering Mechanics 611.)

A E 612. Compressible Fluid Flow (3)
Prerequisites: Aerospace Engineering 302 and credit or concurrent registration in Aerospace Engineering 515.
Theory of flow at supersonic speeds. Linearized theory, threedimensional wings in steady flight, slender-body theory, methods of characteristics.

A E 620. Incompressible Aerodynamics (3)
Prerequisites: Aerospace Engineering 301 and Aerospace Engineering 515.
Theory of incompressible aerodynamics; airfoil and wing theory; computational methods.

A E 621. Theory of Elasticity (3)
Prerequisites: Civil Engineering 301 (or Mechanical Engineering 304) and credit or concurrent registration in Aerospace Engineering 515.
Analysis of stress and strain: stress-strain relations; the equations of elasticity; uniqueness theorem; compatibility conditions; flexure and torsion. (Formerly numbered Engineering Mechanics 621.)

A E 641. Structural Optimization (3)
Prerequisites: Aerospace Engineering 310 and 510.
Analytical and numerical methods for structural optimization. Optimization problem formulation; optimization using calculus of variations; linear programming; nonlinear optimization; global optimization; generalized optimality criteria and dual methods; sensitivity analysis; multilevel and decomposition techniques; shape and topology optimization. (Formerly numbered Engineering Mechanics 641.)

A E 644. Turbulent Flow (3)
Prerequisites: Aerospace Engineering 340 and Aerospace Engineering 515.
Nature of turbulence based on simple flow observations and a theoretical basis for interpreting and predicting the behaviors of specialized turbulent flow problems.
Aerospace Engineering

A E 696. Advanced Topics in Aerospace Engineering (1-3)
Advanced topics in aerospace structural mechanics and design to include non-linear elasticity, plasticity, analysis of plates and shells, fracture mechanics, thermal stress analysis, fatigue analysis, non-linear aeroelasticity, advanced optics in finite element methods, structural optimization and reliability analysis. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

A E 727. Theory of Elastic Stability (3)
Prerequisite: Aerospace Engineering 621.

A E 731. Aeroelasticity (3)
Prerequisites: Aerospace Engineering 611 and 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. (Formerly numbered Engineering Mechanics 731.)

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.
Civil, Construction, and Environmental Engineering

In the College of Engineering

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Faculty
Kenneth D. Walsh, Ph.D., P.E., Professor of Civil, Construction, and Environmental Engineering, The AGC Paul S. Roel Chair in Construction Engineering and Management, Chair of Department of Civil, Construction, and Environmental Engineering
David T. Hayhurst, Ph.D., Professor of Civil, Construction, and Environmental Engineering and Dean of the College of Engineering
Victor M. Ponce, Ph.D., Professor of Civil, Construction, and Environmental Engineering
Janusz C. Supernak, Ph.D., Professor of Civil, Construction, and Environmental Engineering
Julio R. Valdes, Ph.D., P.E., Professor of Civil, Construction, and Environmental Engineering
Bruce D. Westermo, Ph.D., Professor of Civil, Construction, and Environmental Engineering and Associate Dean of the College of Engineering
Fatih Buyuksonmez, Ph.D., P.E., Associate Professor of Civil, Construction, and Environmental Engineering, The Blasker Chair in Environmental Engineering
Robert K. Dowell, Ph.D., Associate Professor of Civil, Construction, and Environmental Engineering
Temesgen Garoma Ararsso, Ph.D., P.E., Associate Professor of Civil, Construction, and Environmental Engineering
Panagiotis Mitropoulos, Ph.D., Associate Professor of Civil, Construction, and Environmental Engineering
Thais Alves, Ph.D., Assistant Professor of Civil, Construction, and Environmental Engineering

Adjunct Faculty
R. Edward Beighley, Ph.D., Civil, Construction, and Environmental Engineering

The Associated General Contractors (AGC) Paul S. Roel Chair in Construction Engineering and Management

The AGC Paul S. Roel Chair in Construction Engineering and Management is funded with an endowment established by generous gifts from members of the Associated General Contractors in San Diego Chapter. Recognizing the need for expert construction professionals, the local construction community has invested considerable resources in this new degree program. In particular, the endowment is funded by a significant gift from Roel Construction, in honor of Paul S. Roel, the son of the company’s founder and the man responsible for moving the family business to San Diego in 1959. The first appointee to the Chair, Dr. Kenneth D. Walsh, is an accomplished teacher-scholar, with a research background in improvement of production systems in construction in residential, commercial, and heavy civil settings.

The Blasker Chair in Environmental Engineering

The Blasker Chair in Environmental Engineering was established by an endowment from the Blasker-Rose-Miah Endowment Fund of the San Diego Foundation. The fund was created in honor of Mr. Samuel Blasker who left $8.0 million to the San Diego Foundation. Mr. Blasker was a successful aeronautical engineer and a business man with a vision to nurture and develop unique and innovative discoveries and experiences which may be of benefit to humanity.

The Blasker Chair is intended to promote excellence in environmental engineering.

The William E. Leonhard, Jr. Chair in Civil, Construction, and Environmental Engineering

The William E. Leonhard, Jr. Chair in Civil, Construction, and Environmental Engineering is funded with an endowment created by generous gifts from William G. Leonhard, Jr. and his parents, William E. and Wyllis M. Leonhard. After Bill Leonhard graduated from San Diego State in 1964, he entered a career in the Air Force, rising to the rank of colonel. In January 1990, he retired from the Air Force, spent the next several years in private industry, and retired again in 1998. The Leonhard Chair is intended to promote excellence in undergraduate education in civil, construction, and environmental engineering.

Courses Acceptable on Master’s Degree Programs in Civil, Construction and Environmental Engineering

(CIV E) (CON E) (ENV E)

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

NOTE: Proof of completion of prerequisites (copy of transcript) is required for all courses which list prerequisites.

Civil Engineering (CIV E)

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)
UPPER DIVISION COURSES

ENV E 554. Process Fundamentals of Environmental Systems (3)
Prerequisites: Minimum grade of C in Environmental Engineering 355, Aerospace Engineering 340, Civil Engineering 444, and Mechanical Engineering 350.
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 658. Earthquake Engineering (3)
Prerequisite: Civil Engineering 607.
Elements of seismology. Methods of analysis for earthquake loads. Procedures and code provisions for the design of earthquake-resistant structures.

CIV E 610. Finite Element Analysis of Structures (3)
Prerequisite: Civil Engineering 321 with minimum grade of C.
General procedure, various types of finite elements; analysis and design of isotropic and orthotropic plates and shells, deep beams, and shear walls using finite element technique; use of digital computers for solutions. Application to civil engineering structures.

CIV E 612. Advanced Concrete Materials (3)
Two lectures and three hours of laboratory.
Prerequisite: Civil Engineering 421.

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 service, 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 520.
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 Engineering (3)
Prerequisite: Civil Engineering 444 with minimum grade of C.
Hydraulics of sediment transport; erosion and sedimentation problems; river mechanics and morphology; mathematical modeling of river hydraulics; sediment transport and river channel changes. Design and environmental problems; erosion control and river training.

CIV E 640. Advanced Soil Mechanics (3)
Prerequisites: Civil Engineering 462 and 463 with minimum grades of C.
Advanced theories of soil mechanics applied to geotechnical and environmental engineering. Classification of terrestrial and marine soils, compaction, consolidation, expansion, stress distribution, strength, permeability and seepage, site improvement, and remediation.

CIV E 641. Advanced Foundation Engineering (3)
Prerequisites: Civil Engineering 462 and 463 with minimum grades of C.
Advanced theories of soil bearing capacity, settlement, and stress distribution applied to design of shallow and deep foundations and earth retaining structures. Subsurface exploration and dewatering methods.

CIV E 642. Groundwater Seepage and Earth Dams (3)
Prerequisites: Civil Engineering 462 and 463 with minimum grades of C.

CIV E 644. Soil Dynamics (3)
Prerequisites: Civil Engineering 462 and 463 with a minimum grade of C.
Behavior of soil and soil-structure systems under dynamic loading. Applications include dynamic earth bearing capacity and pressure, soil spring constants for machine foundation design, liquefaction analysis, site response spectra, and seismic stability of slopes. Case histories discussed.

CIV E 696. Advanced Topics in Civil Engineering (2-3)
Intensive study in specific areas of civil engineering. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

CIV E 781. Seminar in Transportation Engineering (2-3)
Prerequisites: Minimum grade point average of 3.0 and consent of instructor.
An intensive study in transportation engineering. Maximum credit six units applicable to a master’s degree.

CIV E 797. Independent Research (1-3) Cr/NC/RP
Prerequisite: Consent of graduate adviser.
Independent research in civil and environmental engineering. Maximum credit three units applicable to a master’s degree.

CIV E 798. Special Study (1-3) Cr/NC/RP
Prerequisite: Consent of staff; to be arranged with department chair and instructor.

CIV E 799A. Thesis or Project (3) 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.

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

Construction Engineering (CON E) GRADUATE COURSES

CON E 650. Construction Labor Productivity (3)
Prerequisites: Construction Engineering 301 and 401.
Definition of productivity measures and factors that affect productivity of construction labor. Quantification techniques of labor productivity in construction.

CON E 651. Project Production System Design in Construction (3)
Prerequisites: Construction Engineering 650 or Construction Engineering 310, 401, and 490.
Theory of project production system design. Relation to production management theories, productivity improvement techniques, data gathering techniques to support process evaluation. Civil design and construction operations but also applicable to other industries.

CON E 652. Construction Operations Modeling and Technology (3)
Prerequisites: Construction Engineering 310, 401, 651, and Civil Engineering 220.

CON E 654. Construction Claims (3)
Prerequisite: Construction Engineering 301.
Basic foundations construction claims process starting with an understanding of contractual basis for construction claims through final resolution of claims. Clauses that form the basis for claims; recognition of claims, communicating claims elements, pricing claims, and methods for resolving claims.

CON E 655. Project Design and Portfolio Management (3)
Prerequisites: Construction Engineering 651 or Civil Engineering 495; and Environmental Engineering 320 or 355.
Techniques for project selection, definition, design management and value generation, including consideration of ROI, feasibility, and portfolio diversification. Incorporation of life-cycle considerations into all levels of design, including concepts of sustainability. Owner, designer, and contractor perspectives.
Civil, Construction, and Environmental Engineering

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: Classified 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)
Prerequisite: Environmental Engineering 554.
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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Faculty
R. Lal Tummala, Ph.D., Professor of Electrical and Computer Engineering, Chair of Department
Madhu S. Gupta, Ph.D., Professor of Electrical and Computer Engineering, The Radio Frequency Communications Systems Industry Chair
Fredric J. Harris, Ph.D., P.E., Professor of Electrical and Computer Engineering
Paul T. Kolen, Ph.D., Professor of Electrical and Computer Engineering
Gordon K. F. Lee, Ph.D., Professor of Electrical and Computer Engineering (Graduate Adviser)
Yusuf Ozturk, Ph.D., Professor of Electrical and Computer Engineering
Andrew Y. J. Szeto, P.E., Professor of Electrical and Computer Engineering
Ramon Betancourt, Ph.D., Associate Professor of Electrical and Computer Engineering
Sunil Kumar, Ph.D., Associate Professor of Electrical and Computer Engineering
Santosh V. Nagaraj, Ph.D., Associate Professor of Electrical and Computer Engineering
Mahasweta Sarkar, Ph.D., Associate Professor of Electrical and Computer Engineering
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Satish Kumar Sharma, Ph.D., Associate Professor of Electrical and Computer Engineering
Ashkan Ashrafi, Ph.D., Assistant Professor of Electrical and Computer Engineering
Arif Ege Engin, Ph.D., Assistant Professor of Electrical and Computer Engineering

Adjunct Faculty
Khurram Waheed, Ph.D., Electrical and Computer Engineering

The Radio Frequency Communications Systems Industry Chair

The Radio Frequency (RF) Communications Systems Industry Chair was established in recognition of the pervasiveness and vital role of radio frequency and wireless communications in modern society, and the emergence of San Diego as the world’s leading center of research and development in the field of telecommunications and wireless engineering. The chair is sustained through generous contributions of Cubic Corporation and other corporations engaged in wireless communication technology, in appreciation of contributions of students trained in the field at SDSU. The RF Communications Systems Industry Chair is intended to promote excellence in education of RF and microwave engineers, and encourage significant professional activities in the field. Dr. Madhu S. Gupta, the first occupant of the chair, maintains a major involvement in professional work in the discipline and has received international recognition from his professional peers as a distinguished educator and scholar in the field of RF and microwave engineering.

Courses Acceptable on Master’s Degree Program in Electrical and Computer Engineering (E E) (COMPE)

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

Electrical Engineering (E E)

UPPER DIVISION COURSES

NOTE: Prerequisites will be enforced in all 500-level courses. A copy of an official transcript will be accepted as proof. For corequisites, an enrollment confirmation form will be accepted.

All courses 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 with the exception of Electrical Engineering 210, Computer Engineering 160, Mathematics 150, 151, Physics 195, 196, which requires a grade of C or better.

E E 502. Electronic Devices for Rehabilitation (3)
Two lectures and three hours of laboratory.
Prerequisite: Electrical Engineering 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: Aerospace 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.

E E 530. Analog Integrated Circuit Design (3)
Prerequisite: Electrical Engineering 430 with minimum grade of C–. Advanced treatment of transistor pairs, device mismatches, differential amplifiers, current mirrors, active loads, level shifting, and output stages. Parasitic and distributed device parameters. Economics of IC fabrication and impact on design.

E E 534. Solid-State Devices (3)
Prerequisite: Electrical Engineering 434.
Conduction theory of solids. Characteristics of tunnel, backward breakdown, multilayer and varactor diodes; silicon controlled rectifiers and switches, unijunction transistors, hot electron devices. Lasers and laser applications.

E E 540. Microwave Devices and Systems (3)
Prerequisite: Electrical Engineering 440. Recommended: Aerospace Engineering 515.
Applications of Maxwell’s equations to wave propagation. Microwave network parameters; guided wave transmission and reflection. Design of filters, couplers, power dividers and amplifiers. Applications in radar and telecommunications systems.

E E 540L. Microwave Design and Measurements Laboratory (1)
Three hours of laboratory.
Prerequisites: Credit or concurrent registration in Electrical Engineering 430L and 540.
Designs, computer simulations, fabrications, and tests of microwave matching networks, couplers, filters, and amplifiers.

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E E 541. Electro-Optics (3)
Prerequisite: Electrical Engineering 434.
Optical/electronic devices and systems; wave beams; light-matter quantum interactions; incoherent and laser light sources; modulators and detectors. Applications in data transmission, measurement, and materials processing.

E E 546. Optical Fiber Communications Systems (3)
Prerequisite: Electrical Engineering 434.
Optical fiber attenuation and dispersion, light-emitting diodes and laser diodes, PIN diodes and avalanche photodiodes, receiver designs, optical power budgets and rise time budgets, applications in digital and analog communication systems.

E E 556. Digital Signal Processing (3)
Prerequisite: Electrical Engineering 410.
Discrete-time signals and systems, Sampling, Z-transform, Discrete-time Fourier transform and frequency responses, DFT, FFT, and introduction to IIR and FIR digital filter design.

E E 558. Digital Communications (3)
Prerequisite: Electrical Engineering 458.
Design of baseband digital communication systems; noise characterization, sampling, quantization, matched filter receivers, bit-error performance, inter-symbol interference, link budget analysis.

E E 558L. Communications and Digital Signal Processing Laboratory (1)
Prerequisite: Credit or concurrent registration in Electrical Engineering 556 or 558.
Experiments in modulation techniques, effects of noise on system performance, digital filters, and signal processing.

E E 581. Power System Dynamics (3)
Prerequisite: Electrical Engineering 480.
Three-phase faults, symmetrical components, unsymmetrical faults, protective relay operating principles, economic dispatch of thermal power generation units, power system controls, voltage and power stability.

E E 596. Advanced Electrical Engineering Topics (1-3)
Prerequisite: Consent of instructor.
Prerequisites will be enforced in all 500-level courses. A minimum grade of C– or better in all prerequisite courses is required. Maximum credit of six units of Electrical Engineering 596 and 696 applicable to a master’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

COMPE 556. 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 multitasking, 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 530.
Design of digital integrated circuits based on CMOS technology; characterization of field effect transistors, transistor level design and simulation of logic gates and subsystems; chip layout, design rules, introduction to processing, ALU architecture.

COMPE 596. Advanced Computer Engineering Topics (1-3)
Prerequisite: Consent of instructor.
Modern developments in computer engineering. May be repeated with new content. See Class Schedule for specific content. Maximum credit of nine units for any combination of Computer Engineering 496 and 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

Electrical Engineering (E E)

GRADUATE COURSES

NOTE: All listed prerequisite courses or their equivalent for computer engineering and electrical engineering courses must be satisfied with a grade of C– or better.

E E 600. Seminar (1-3)
Prerequisite: Consent of instructor.
An intensive study in advance electrical engineering. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

E E 601. Linear System Theory and Design (3)
Prerequisite: Electrical Engineering 420.
State models and solutions of the state equations, stability, controllability and observability, realization and minimal realizations, linear state and output feedback control, introduction to linear optimal control.

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)
Prerequisite: Electrical Engineering 440, 558, 602.
Characteristics and performance measures of RF subsystems 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 645. Antennas and Propagation (3)
Prerequisite: Electrical Engineering 540.
Impedance characteristics and radiation patterns of thin linear antenna elements; field intensity calculations. Tropospheric and ionospheric propagation; propagation anomalies.

E E 650. Modern Communication Theory (3)
Prerequisites: Electrical Engineering 558 and 602.
Wireless digital communication; bandpass modulation and demodulation, multiple access techniques, broadband signaling techniques, spread spectrum techniques; applications include CDMA and OFDM.

E E 652. Principles and Applications of Information Theory (3)
Prerequisites: Electrical Engineering 558 and 602.
Information measure of data sources; Shannon’s theorem and capacity of communication links; rate-distortion theory and performance of source codes.

E E 653. Coding Theory (3)
Prerequisite: Electrical Engineering 558.
Error control for digital information; arithmetic of Galois fields; block, cyclic, convolutional and turbo encoding and decoding; applications in digital communication and computer systems.

E E 654. Adaptive Algorithms (3)
Prerequisite: Electrical Engineering 556.
Adaptive DSP algorithms. Time varying, data dependent filters, adaptive predictors, cancelers, equalizers. LMS and RLS algorithms, tapped delay line, lattice, and decision feedback structures. Adaptive beam forming and beam steering.

E E 655. Modern Design (3)
Prerequisites: Electrical Engineering 556 and 558.
System level and DSP design of modems for wireless and wireline communications. Study modems for QAM, OFDM, CDMA, and T1 modulation.

E E 656. Multirate Signal Processing (3)
Prerequisite: Electrical Engineering 556.
DSP techniques for sample rate changes in digital filters. Decimation and interpolation, aliasing as a processing option in resampling filters. Applications in communication and entertainment media systems.

E E 657. Digital Image Processing (3)
Prerequisite: Electrical Engineering 556.
Theory of two-dimensional signals and systems, image transforms, image enhancement, restoration and compression, image analysis and computer vision.

E E 658. Advanced Digital Signal Processing (3)
Prerequisites: Electrical Engineering 556 and 601.
Quantization noise, FIR and IIR filter design (bilinear transform, Parks-McClellan and least squares algorithms, rounding effects); Robust digital filter architectures. Sigma-delta modulation. Orthogonal decompositions and wavelet transform.

E E 660. High Speed Networks: Design Principles and Recent Advances (3)
Prerequisite: Computer Engineering 560.
Provides students with knowledge of recent developments in area of computer networks. Current research in high speed computer networks.

E E 661. Wireless Sensor Networks (3)
Prerequisite: Computer Engineering 560.
Sensor platforms, wireless channel characteristics, time synchronization, medium access control, topology control, routing protocols, localization, coverage and placement, detection and tracking, query processing.

E E 665. Multimedia Wireless Networks (3)
Prerequisite: Computer Engineering 565.
Multimedia source characteristics, compressed bitstreams, error resiliency, quality of service, cellular video telephony, multimedia QoS-awareWLAN, peer to peer networks, and multimedia broadcast multicast services.

E E 672. VLSI System Design (3)
Prerequisite: Computer Engineering 572.
Design of microprocessor data paths and controllers, memory management, pipelines, multipliers, Risc and multiprocessor systems and applications.

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

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

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

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

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

E E 798. Special Study (1-3) Cr/NC/RP
Prerequisite: Consent of department chair.
Individual study. Maximum credit three units applicable to a master’s degree for students in Plan B study.

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

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

E E 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program courses.
Registration required for all students taking the comprehensive examination for the master’s degree. Registration in 799C limited to two semesters.
Mechanical Engineering

In the College of Engineering

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Faculty
Morteza M. Mehrabadi, Ph.D., Professor of Mechanical Engineering, Chair of Department
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Subhrata Bhattacharjee, Ph.D., Professor of Mechanical Engineering
Randall German, Ph.D., Professor of Mechanical Engineering
Thomas J. Impelluso, Ph.D., Professor of Mechanical Engineering
Ronald A. Kline, Ph.D., Professor of Mechanical Engineering
Karen D. May-Newman, Ph.D., Professor of Mechanical Engineering
(Bioengineering Graduate Adviser)
Kee S. Moon, Ph.D., Professor of Mechanical Engineering
Khaled B. Morsi, Ph.D., Professor of Mechanical Engineering
Eugene A. Olevsky, Ph.D., Distinguished Professor of Mechanical Engineering and Director of Doctoral Programs in the College of Engineering
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 Aerospace Engineering 340.
Mechanics of continua, stress tensor, deformation and flow, constitutive relations. Applications to common solids and fluids

M E 514. Advanced Machine Design (3)
Prerequisites: Mechanical Engineering 314 and 340.
Application of advanced mechanics of materials to design and analysis of mechanical elements. Probabilistic design and finite element methods and applications. Design projects involve extensive use of finite element programs.

M E 520. Introduction to Mechanical Vibrations (3)
Prerequisites: Mechanical Engineering 304 (or Civil Engineering 301) and Mechanical Engineering 330.
Analysis of mechanical vibration; single- and multi-degree of freedom systems; free and forced vibrations; vibration isolation; vibration absorbers. Theory of vibration measuring instruments.

M E 530. Automatic Control Systems (3)
Prerequisite: Mechanical Engineering 330.
Dynamic characteristics of control components and systems. Stability and response of closed loop systems. Design of control systems.

M E 540. Nonmetallic Materials (3)
Prerequisites: Mechanical Engineering 314 and 340.

M E 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 compactation, 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: Mechanical Engineering 351, 452, and Aerospace Engineering 340.
Application of thermodynamics, fluid mechanics and heat transfer to the thermal design of solar energy conversion systems. Computer simulations utilized.

M E 560. Biomechanics (3)
Prerequisites: Mechanical Engineering 304 (or Civil Engineering 301) and Aerospace Engineering 340.
Application of engineering methodologies for quantitative understanding of biological/physiological phenomena. Continuum mechanics principles, cardiovascular system and its components viewed from a mechanistic standpoint.

One lecture and four hours of laboratory.
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.

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.
ME 610. Finite Element Methods in Mechanical Engineering (3)  
Prerequisites: Aerospace 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.

ME 645. Mechanical Behavior of Engineering Materials (3)  
Prerequisites: Mechanical Engineering 314, 340, and 350.  

ME 646. Mechanics of Sintering (3)  
Prerequisite: Mechanical Engineering 340.  
Practical aspects and conceptual models and mechanisms associated with sintering of ceramic and metal powders.

ME 651. Advanced Thermodynamics (3)  
Prerequisites: Aerospace 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.

ME 653. Combustion (3)  
Prerequisite: Mechanical Engineering 351.  
Thermodynamics of combustion, chemical equilibrium, chemical kinetics, combustion of gaseous, liquid and solid fuels, and their application.

ME 656. Conduction Heat and Transfer (3)  
Prerequisites: Mechanical Engineering 452 and Aerospace Engineering 515.  
Conduction heat transfer analysis of multi-dimensional and transient processes using both classical analysis and numerical methods.

ME 657. Convection Heat Transfer (3)  
Prerequisites: Mechanical Engineering 452 and Aerospace Engineering 515.  
Convection heat transfer processes under laminar and turbulent conditions. Mass transfer. Scaling arguments, analytical and numerical modeling.

ME 658. Radiation Heat Transfer (3)  
Prerequisites: Mechanical Engineering 452 and Aerospace Engineering 515.  

ME 661. Gas Dynamics (3)  
Prerequisites: Mechanical Engineering 351 and Aerospace Engineering 515.  
Thermodynamics of high velocity compressible fluid flow. Adiabatic and diabatic flow; shock phenomena; imperfect gases; multidimensional flow. Applications to the propulsive duct and turbomachinery.

ME 681. Biomaterials (3)  
Prerequisites: Mechanical Engineering 240 and 580.  

ME 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.

ME 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.

ME 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.

ME 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.

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

ME 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.

ME 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.

ME 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., Associate Professor of English
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Director of Graduate Studies, M.A. Program
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Phillip Serrato, Ph.D., Associate Professor of English and Comparative Literature
Barry G. Stampfl, Ph.D., Associate Professor of English
Joseph T. Thomas, Jr., Ph.D., Associate Professor of English

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

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

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

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

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

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

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

(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
- San Diego State University
- 5500 Campanile Drive
- San Diego, CA 92182-8140

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

Master of Arts Degree in English

Admission to the Degree Curriculum

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

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

1. Classified Graduate Standing

To be considered for admission, students must meet the following minimal requirements:

a. 24 units of upper division work in English. (Students choosing the comparative literature specialization may substitute foreign language literature or comparative literature courses.)

b. 2.85 overall on a 4.0 Grade Point Scale.

c. 3.0 grade point average in the English major. (Students choosing the comparative literature specialization must possess a 3.0 grade point average in either foreign language literature or comparative literature courses.)

d. The applicant normally must achieve a minimum score of 156 on the verbal section of the new Graduate Record Examination, and a minimum of 5.0 on the GRE analytical essay examination.

2. Conditional Classified Graduate Standing

a. Conditional acceptance may be granted if there is a deficiency in any of the above requirements. A student accepted conditionally must customarily achieve an average of 3.25 in nine units of English or comparative literature courses with no grade less than B– before proceeding to further study and is limited to 12 units. Any units taken above this quota will not count toward the 30 units for the master’s degree in English.

b. English major unit deficiencies. Students who lack 24 units of credit in upper division courses in English or in foreign language literature or comparative literature courses will be considered for conditional standing if they meet the requirements of 2.85 overall and achieve a minimum score of 156 on the verbal section of the new Graduate Record Examination and a minimum of 5.0 on the GRE analytical essay examination. After the completion of 24 units for the undergraduate major, students will be considered for classified graduate standing if they meet the other requirements. Students choosing a comparative literature specialization may substitute 24 units of upper division coursework in foreign language literature or comparative literature courses for part of this requirement.

Advancement to Candidacy and Language Requirement

All students must satisfy the general requirements for advancement to candidacy, including the foreign language requirement, as stated in Part Four of this bulletin. Each candidate, with the approval of the graduate director, may fulfill the foreign language requirement in one of several ways: (1) by passing a local examination administered by one of the university’s foreign language departments, (2) by completing one three-unit upper division foreign language literature course with readings in the original language with a grade of C (2.0) or better, or (3) by passing an examination to be determined by the graduate adviser if the chosen language is one not taught in a department at San Diego State University.

Specific Requirements for the Master of Arts Degree

(Major Code: 15011) (SIMS Code: 112101)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the student must complete a 30-unit program of study, approved by the department’s director of graduate studies, with at least 27 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 604E 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 prior 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 624 British Literature (3)
- ENGL 700 Seminar: A Major Author or Authors (3)
- ENGL 724 Seminar: Issues in British Literature (3)

(With the prior consent of the graduate adviser, English 798, with appropriate content, may be substituted for one of the above courses.)

Electives: Diversification in Literary and Writing Research. With the approval of the graduate adviser, 15 units selected from other English and comparative literature departmental graduate offerings. At least six of these elective units must be taken outside of specialization and from other specializations within the English M.A. program. A maximum of six units of courses acceptable for graduate credit in other departments (when appropriate) may be used toward satisfying this requirement.

Culminating Experience:

Plan A: (Thesis) – ENGL 799A (3 units)
Plan B: (Portfolio Assessment and Defense) – ENGL 790 or an additional three unit 700-level course in English with the approval of the graduate adviser.

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

Core Course (3 units):
- ENGL 600 Introduction to Graduate Study (3)

Children’s Literature Research Focus. With prior approval by the graduate adviser, a student will select nine units from the following:

- ENGL 604D Seminar: Children’s Literature Literary Period or Movement (3)
- ENGL 606D Seminar: Children’s Literature Literary Type (3)
- ENGL 700 Seminar: A Major Author or Authors (3)
- ENGL 727 Seminar: Issues in Children’s Literature (3)

(With the prior 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 626 Comparative Literature (3)
  - ENGL 700 Seminar: A Major Author or Authors (3)
  - ENGL 726 Seminar: Issues in Comparative Literature (3)

(With the prior 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)

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 3.3 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 a minimum of 34 units within their official program of study, including transfer credit, with a minimum grade point average of 3.25 and have no grade less than B-. Students will be permitted to repeat only one course to achieve these levels. After a student has filed an official program of study and advanced to candidacy, the student must enroll in and complete English 797 and 799A if pursuing thesis option (Plan A) or must enroll in six units of manuscript preparation (English 791) if pursuing manuscript option (Plan B).

If the student chooses to pursue thesis option (English 797 and 799A) instead of enrolling in six units of manuscript preparation (English 791), the student is required to have the approval of the M.F.A. graduate adviser. The M.F.A. creative writing committee must have approved a thesis topic and must recommend the appointment of a thesis adviser from the student’s area of focus (fiction or poetry). After advancement to candidacy, the student must enroll in and complete English 797 and 799A if pursuing Plan A or six units of English 791 if pursuing Plan B.

In addition, the M.F.A. graduate committee must have recommended appointment of a thesis adviser from the student’s area of focus (poetry, fiction) and the creative writing committee must have approved a thesis topic. Applicants for advancement should submit a portfolio of their creative work to the creative writing committee for a recommendation for advancement. Aspects to be reviewed include artistic portfolio of their creative work to the creative writing committee for a recommended appointment of a thesis adviser from the student’s area of focus (fiction or poetry). After advancement to candidacy, the 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 720 Seminar: American 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 727 Seminar: Issues in Children’s Literature (3)
      ENGL 784 Seminar: Creative Non-Fiction (3)
      ENGL 796 Internship (3) Cr/NC
      ENGL 798 Special Study (3) Cr/NC/RP with consent of instructor.

3. Six units of electives selected with consent of adviser.

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

Advanced Certificate in Children’s/Adolescent Literature

(Certificate Code: 90001) (SIMS Code: 112109)

The Department of English and Comparative Literature offers an Advanced Certificate in Children’s/Adolescent Literature for those who may already have M.A. or Ph.D. 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, 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, Claudiah Equiano, Cotton Mather, Jonathan Edwards, Benjamin Franklin, Thomas Jefferson, various Native American speakers and writers, and others.

ENGL 522. Literature of the United States, 1800-1860 (3)
Prerequisites: Six lower division units in literature and/or creative writing.

Representative works by United States writers from 1800 to 1860; likely to include works by Emerson, Hawthorne, Melville, Poe, Stowe, Thoreau, Whitman, and others.

ENGL 523. Literature of the United States, 1860-1920 (3)
Prerequisites: Six lower division units in literature and/or creative writing.

Representative works by United States writers from 1860 to 1920; likely to include works by Charles Chesnutt, Kate Chopin, Stephen Crane, Emily Dickinson, Henry James, Mark Twain, Edith Wharton, and others.

ENGL 524. Literature of the United States, 1920-1960 (3)
Prerequisites: Six lower division units in literature and/or creative writing.

Representative works by United States writers from 1920 to 1960; likely to include works by Willa Cather, T. S. Eliot, William Faulkner, F. Scott Fitzgerald, Ernest Hemingway, Zora Neale Hurston, Eugene O'Neill, Katherine Anne Porter, Ezra Pound, John Steinbeck, and others.

ENGL 525. Literature of the United States, 1960 to Present (3)
Prerequisites: Six lower division units in literature and/or creative writing.

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

ENGL 526. Topics in Literature of the United States (3)
Prerequisites: Six lower division units in literature and/or creative writing.

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

ENGL 527. Genre Studies (3)
Prerequisites: Six lower division units in literature and/or creative writing.

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

ENGL 528. Authors (3)
Prerequisites: Six lower division units in literature and/or creative writing.

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

ENGL 530. Chaucer (3)
Prerequisites: Six lower division units in literature and/or creative writing.

Chaucer’s works, with emphasis on The Canterbury Tales and Troilus and Criseyde.

ENGL 533. Shakespeare (3)
Prerequisites: Six lower division units in literature and/or creative writing.

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

ENGL 534. Study of Shakespeare (3)
Prerequisite: English 533.

Advanced study of Shakespeare’s achievement as poet and playwright. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

ENGL 536. British Literary Periods, Beginnings to 1660 (3)
Prerequisites: Six lower division units in literature and/or creative writing.

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

ENGL 537. Milton (3)
Prerequisites: Six lower division units in literature and/or creative writing.

Milton’s writings, with emphasis on Paradise Lost.
ENGL 540A-540B. English Fiction (3-3)
Prerequisites: Six lower division units in literature and/or creative writing.

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 550. Queer Texts and Contexts (3)
Prerequisites: Six lower division units in literature and/or creative writing.
Queer knowledge and identities as expressed in literature and culture, to include queer theory, history, and experience. May be repeated with new 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.
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.
Techniques of the short story from the writer’s point of view. Introduction to critical and theoretical literature on the short story. Includes a creative writing workshop.

ENGL 572. Techniques of the Novel (3)
Prerequisites: Three lower division units in literature and/or creative writing.
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 573. Techniques of the Creative Writing Workshop (3)
Prerequisites: Three lower division units in literature and/or creative writing.
A creative writing workshop. See Class Schedule for specific content. Maximum credit six units.

ENGL 574. Topics in Creative Writing (3)
Prerequisites: Three lower division units in literature and/or creative writing.
Study of a literary period such as the Age of Modernism. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

ENGL 575. Literary Editing and Publishing (3)
Prerequisites: Three lower division units in literature and/or creative writing.
Principles and practices of editing and literary publishing. Workshop on small press publishing. Includes editing and publishing workshop.

ENGL 576. Techniques of Screenwriting (3)
Prerequisites: Six lower division units in literature and/or creative writing.
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 577. Techniques of Poetry (3)
Prerequisites: Three lower division units in literature and/or creative writing.
Study of a literary period such as the Age of Modernism. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

ENGL 578. Writing of Poetry (3)
Prerequisites: Six lower division units in literature and/or creative writing.
A creative writing workshop in poetry. Continuation of English 570. Maximum credit six units.

ENGL 579. Topics in Creative Writing (3)
Prerequisites: Three lower division units in literature and/or creative writing.
Study of a literary period such as the Age of Modernism. May be repeated with new content. 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.
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.
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 582W. Writing of Nonfiction (3)
Prerequisites: Three lower division units in literature and/or creative writing.
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 584W. Writing Informal Essays (3)
Prerequisites: Six lower division units in literature and/or creative writing.
A creative writing workshop in nonfiction, especially the essay as an art form. Maximum credit six units.

ENGL 586. Selected Topics in English (1-3)
Prerequisites: Three lower division units in literature and/or creative writing.
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 with approval of the graduate adviser.

Comparative Literature (C LT)  
UPPER DIVISION COURSES

C LT 512. European Literature Before 1800 (3)
Prerequisites: Six units in literature.
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)
Prerequisites: Six units in literature.
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)
Prerequisites: Six units in literature.
Study of a literary period such as the Age of Modernism. May be repeated with new content. Maximum credit six units.
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
D. Children’s Literature

ENGL 606. Seminar: A Literary Type (3)
Prerequisite: Credit or concurrent registration in English 600.
Advanced study of a specific literary genre, such as the novel, tragic drama, lyric poetry, the personal essay, autobiography. May be repeated with new content. Maximum credit six units applicable to a master’s degree.
A. American Literature
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 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 630. Form and Theory of Poetry (3)
Prerequisite: Twelve upper division units in English.
Poetry as a literary form. May be repeated with new content. Maximum credit six units applicable to an M.F.A. degree in creative writing.

ENGL 631. Form and Theory of Fiction (3)
Prerequisite: Twelve upper division units in English.
Fiction as a literary form. May be repeated with new content. Maximum credit six units applicable to an M.F.A. degree in creative writing.

ENGL 696. Special Topics (3)
Prerequisite: Twelve upper division units in English.
Intensive study in specific areas of English. May be repeated with new content. See Class Schedule for specific content. Maximum combined credit of six units of 526 or 549 applicable to a 30-unit master’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

ENGL 700. Seminar: A Major Author or Authors (3)
Prerequisite: English 600.
Critical study of a major author or authors such as William Shakespeare, Charles Dickens, Edith Wharton, Marcel Proust, Gabriel García Márquez, Toni Morrison and others. May be repeated with new content. Maximum credit six units applicable to a master’s degree.

ENGL 724. Seminar: Issues in British Literature (3)
Prerequisite: English 600.
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)
Prerequisite: English 600.
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)
Prerequisite: English 600.
Advanced study of an issue such as translation, negritude, cultural studies, semiotics, deconstruction, or literature and censorship. May be repeated with new content. Maximum credit six units applicable to a master’s degree.

ENGL 727. Seminar: Issues in Children’s Literature (3)
Prerequisite: Six units of approved 500- or 600-level courses.
Issues and topics of special interest to children’s literature, such as gender depictions, commodification, cross-over writing, and regionalism. Maximum credit six units applicable to a master’s degree.

ENGL 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 791A. Seminar in M.F.A. Manuscript: Poetry (3) Cr/NC
Prerequisite: Completion of two years of study in the MFA program.
Techniques of manuscript construction from a poet’s point of view. Students work on a draft of a manuscript of poetry to include discussion of first books by major authors and a creative writing workshop. Maximum credit six units in English 791A applicable to a master’s degree.

ENGL 791B. Seminar in M.F.A. Manuscript: Fiction (3) Cr/NC
Prerequisite: Completion of two years of study in the MFA program.
Techniques of manuscript construction from a fiction writer’s point of view. Students work on a draft of a manuscript of fiction to include discussion of first books by major authors and a creative writing workshop. Maximum credit six units in English 791B applicable to a master’s degree.

ENGL 796. Internship (3) Cr/NC
Prerequisites: Advancement to candidacy for the Master of Arts degree in English and comparative literature or admission to the Master of Fine Arts program and consent of the graduate adviser and supervising professor.
Work experience with a practicing professional or company in the community, such as working as editorial assistant or teacher intern.

ENGL 797. Thesis Research (3) Cr/NC/RP
Prerequisite: Advancement to candidacy in the M.F.A. degree in creative writing.
Independent work in general field of candidate’s thesis project.

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

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

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

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

In the School of Exercise and Nutritional Sciences
In the College of Health and Human Services

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
Larry S. Verity, Ph.D., Professor of Exercise and Nutritional Sciences and Associate Dean of the College of Health and Human Services

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 assistants 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. Students learn pragmatic skills, such as physiological testing, exercise training, and participant education in the field of preventive and clinical exercise programming.

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

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

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

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

Master of Science Degree in Exercise Physiology

Master of Science Degree in Nutritional Science and Master of Science Degree in Exercise Physiology
The following materials should be mailed or delivered by February 1 for admission for the fall semester to:
School of Exercise and Nutritional Sciences
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7251

(1) Two letters of recommendation;
(2) Statement of purpose (1-2 pages describing applicant's background, research interests/experiences, and goals).

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 (old GRE score) or 151 (new GRE score) on the verbal and 475 (old GRE score) or 142 (new GRE score) on the quantitative sections of the GRE General Aptitude Test. Students will be admitted ONLY in the fall semester. Submit applications no later than February 1.

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy, as described in Part Four of this bulletin. Nine units of coursework in the official program must remain after advancement to candidacy.
Specific Requirements for the Master of Science Degree
(Major Code: 08355) (SIMS Code: 556521)

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 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-level 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 the 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):
- DPT 750 Concepts in Physiology, Pathophysiology, and Pharmacology (4)
- DPT 830 Cardiopulmonary Therapeutics (4)
- ENS 601 Experimental Methods in Exercise and Nutritional Sciences (3)
- ENS 602 Research Evaluation in Exercise and Nutritional Sciences (3)
- ENS 661 Seminar in Advanced Physiology of Exercise (3)
- ENS 662 Advanced Exercise Physiology Laboratory (3)
- ENS 796 Exercise Specialist Internship (3) Cr/NC
- ENS 799A Thesis or Project (3) Cr/NC/RP

Electives: Ten units 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 (old GRE score) or 151 (new GRE score) on the verbal and 475 (old GRE score) or 142 (new GRE score) on the quantitative sections of the GRE General Aptitude 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: 552990)

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.

Required courses (36 units):
- DPT 750 Concepts in Physiology, Pathophysiology, and Pharmacology (4)
- DPT 830 Cardiopulmonary Therapeutics (4)
- ENS 601 Experimental Methods in Exercise and Nutritional Sciences (3)
- ENS 602 Research Evaluation in Exercise and Nutritional Sciences (3)
- ENS 661 Seminar in Advanced Physiology of Exercise (3)
- ENS 662 Advanced Exercise Physiology Laboratory (3)
- ENS 796 Exercise Specialist Internship (3) Cr/NC
- ENS 799A Thesis (3) 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)

Electives: Seven units to be selected with approval of graduate adviser.

Plan A
- ENS 799A Thesis (3) Cr/NC/RP
- NUTR 799A Thesis (3) Cr/NC/RP

Plan B
- ENS 790 Seminar in Directed Readings (3) Cr/NC

If a student, after entering the concurrent program leading to a Master of Science degree in nutritional science and a Master of Science degree in exercise physiology returns to a single degree program, all the requirements for the single degree program must then be met.

The school expects the student to complete the degree requirements within seven years. Failure to complete the degree requirements within seven years will result in dismissal from the program.
Courses Acceptable on Master's Degree Programs (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.

Exercise and Nutritional Sciences (ENS)

UPPER DIVISION 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 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.

Exercise and Nutritional Sciences (ENS)

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 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)

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 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: Credit or concurrent registration in Exercise and Nutritional Sciences 602 and advancement to candidacy. Preparation for comprehensive examination for students pursuing either an M.A. or an M.S. degree under Plan B.

ENS 796. Exercise Specialist Internship (1-3) Cr/NC
Three hours of laboratory per unit. Prerequisites: Exercise and Nutritional Sciences 659, 662. 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/~frenchital/

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)

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 French are taught in French unless otherwise stated.

Related 500-level courses in other departments may be taken for a total of six units credit with prior approval of the graduate adviser.

FRENC 501. Translation (3)
Prerequisite: French 302.
Stylistic comparison of French and English through translation of a variety of prose styles from English to French and from French to English.

FRENC 520. French and Francophone Literary Studies (3)
Prerequisites: French 302 and 305A or 305B.
Specialized study of a century, genre, movement or theme in French and Francophone literature. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

FRENC 530. French and Francophone Cultural Studies (3)
Prerequisites: French 302 and 421 or 422.
Specialized study of artistic and intellectual trends, customs, and politics in French and Francophone culture. May be repeated with new title and content. See Class Schedule for specific content. Maximum credit six units.

FRENC 596. Topics in French Studies (1-4)
Prerequisite: French 302.
Topics in French literature, culture, and linguistics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES

Related graduate level courses in other departments may be taken for a total of six units credit with prior approval of the graduate adviser.

FRENC 621. Critical Methods (3)
Prerequisite: French 302.
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: Geography Annex 123
TELEPHONE: 619-594-5437 / FAX: 619-594-4938

Faculty
Stuart C. Adiken, Ph.D., Professor of Geography, Chair of Department
George Christakos, Ph.D., Professor of Geography, The Stephen and Mary Birch Foundation Chair in Geographical Studies
Allen S. Hope, Ph.D., Professor of Geography, Master's Degree Programs Adviser
Piotr Jankowski, Ph.D., Professor of Geography
John F. O’Leary, Ph.D., Professor of Geography
André Skupin, Ph.D., Professor of Geography
Douglas A. Stow, Ph.D., Professor of Geography, Doctoral Program Adviser
Ming-Hsiang Tsou, Ph.D., Professor of Geography
Li An, Ph.D., Associate Professor of Geography
Trent Biggs, Ph.D., Associate Professor of Geography
Kathleen A. Farley, Ph.D., Associate Professor of Geography
Pascale J. Marcelli, Ph.D., Associate Professor of Geography
Anne-Marie Debanne, Ph.D., Assistant Professor of Geography
Arielle S. Levine, Ph.D., Assistant Professor of Geography
Anne-Marie Debanne, Ph.D., Assistant Professor of Geography
Pascale J. Marcelli, Ph.D., Associate Professor of Geography
Arielle S. Levine, Ph.D., Assistant Professor of Geography
Katherine Elizabeth Swanson, Ph.D., Assistant Professor of Geography

The Stephen and Mary Birch Foundation Chair in Geographical Studies
The Stephen and Mary Birch Foundation Chair in Geographical Studies was created through the Birch Foundation’s grant to the Department of Geography to endow a chair and create a Center for Earth Systems Analysis Research. Dr. George Christakos, internationally recognized for his expertise in theory and methodology of spatial analysis and mathematical modeling applied to environmental, ecological, health, and geographical systems is the third holder of the chair.

Associateships
Approximately 45 graduate teaching associateships and graduate research associateships in geography are available to highly qualified students. Applications and additional information may be secured from the department. The deadline for submitting applications for teaching associateships or research associateships is March 1 for the Master's degree programs and February 1 for the Doctor of Philosophy degree program. Applications for associateships must include transcripts, three letters of recommendation, and Graduate Record Examination (GRE) scores, and a statement of interests and goals. Our graduate teaching associateships program can prepare students for a teaching career.

General Information
The Department of Geography offers graduate study leading to the Master of Arts, Master of Science, and Doctor of Philosophy degrees in geography. These degrees provide the essential education, technical training, and creative experience necessary for professional activity or college-level teaching. Graduate programs are generally assigned around one of the following systematic areas:

Group A – Systematic Areas
- Human Geography — Urban, Social, and Political Geography
- Environmental Geography — Society and Environment, Watershed/Ecosystems Analysis
- Physical Geography — Biogeography, Climatology, Hydrology, Landscape Ecology
- Geographic Information Science and Technology

Each student's program is designed around at least one of the areas selected from Group A and at least one of the technique emphases selected from Group B. The main regional foci are California, Latin America, Mexico-U.S. borderlands, South Pacific Islands, Africa, and Asia. Further information on systematic areas, techniques and regional foci, as well as general program information can be obtained through the Department of Geography’s Web site at http://geography.sdsu.edu.

The master's degree programs are designed to provide advanced training for a) students who plan to terminate their graduate studies at the master's level, and b) those who anticipate additional work leading to the doctoral degree in geography or related fields.

The Master of Arts degree program is designed around one of the systematic areas previously listed in Group A and will generally also include coursework in one of or more technical skills in Group B. The Master of Science program has two concentrations (1) geographic information science, and (2) watershed science.

The Doctor of Philosophy program, offered jointly with the University of California, Santa Barbara, provides advanced training for research and teaching at the highest academic level.

Research and instructional facilities provided by the Department of Geography include a map library, the Stephen and Mary Birch Center for Earth Systems Analysis Research (CESAR), an image processing/GIS center, laboratories for physical geography, cartography, remote sensing and aerial interpretation, and equipment for field studies.

Admission to Master's and Doctoral Study
Students applying for admission should electronically submit the university application available at http://www.csumentor.edu, along with the $55 application fee.

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

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

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

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

Group B – Spatial Analytical Methods and Techniques
- Spatial Statistics
- Qualitative Methods and Ethnography
- 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

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Graduate Affairs.

Enrollment Services will notify you of admission to the Division of Services and in the Department of Geography are complete. The master's program in geography after application files in Enrollment courses in addition to the minimum 30 units required for the degree. The master's advising committee will be required to complete specified English must present a score of 213 or above. The minimum English language score is 550. Applicants taking the Computer Based Test of admission to the master's program for either the fall or spring semester. Department requirements are normally a minimum grade 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.

Master of Arts Degree in Geography

Master of Science Degree in Geography

The following materials should be sent to:

Department of Geography
Master's Program Administrative Coordinator
San Diego State University
San Diego, CA 92182-4493

(1) Department application form (available online at http://geography.sdsu.edu/Programs/Masters/m_apply.html);
(2) A statement of your geographic research interests and professional goals, and the names of three SDSU geography faculty who would be suitable program advisers;
(3) Three letters of recommendation.

Ph.D. Degree in Geography

The following materials should be sent to:

Department of Geography
Graduate Administrative Coordinator
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4493

(1) Department application form (available online at http://geography.sdsu.edu/Programs/PhD/p_forms.html);
(2) A statement of your geographic research interests and professional goals, and the names of SDSU and UCSB geography faculty who would be suitable program advisers;
(3) Three letters of recommendation.
(4) Copies of GRE (and TOEFL, if applicable) scores;
(5) Current resume or vita.

Section I.
Master's Degree Programs

Admission to the Degree Curriculum

Admission application deadlines for the upcoming fall semester are given at http://geography.sdsu.edu/Programs/Masters/m_apply.html. The Department of Geography does not encourage students to apply for admission for spring semester. Completed applications for spring admission must be submitted to the Department of Geography by September 15.

Satisfaction of the minimum requirements of San Diego State University and of the Department of Geography does not guarantee admission to the master's program for either the fall or spring semester. Department requirements are normally a minimum grade point average of 3.0 in the last 60 semester units taken as an undergraduate and a satisfactory combined score (minimum 1000) on the verbal and quantitative section of the GRE. The minimum English language score is 550. Applicants taking the Computer Based Test of English must present a score of 213 or above.

Candidates whose preparation is considered insufficient by the master's advising committee will be required to complete specified courses in addition to the minimum 30 units required for the degree. We will notify applicants of our recommendation on admission to the master's program in geography after application files in Enrollment Services and in the Department of Geography are complete. Enrollment Services will notify you of admission to the Division of Graduate Affairs.

Advancement to Candidacy

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

Specific Requirements for the Master of Arts Degree

(Major Code: 22061) (SIMS Code: 112901)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete a graduate program of at least 30 units of upper division and graduate courses selected with the approval of the master's advising committee. The department requires students to complete all degree requirements within seven years of the semester that they entered the M.A. program.

The requirements for students electing the Master of Arts degree program are as follows:

1. A minimum of 30 units of courses numbered 500 or above as approved by the geography department master's advising committee. At least 24 of these units must be from the geography department.
2. A minimum of 18 of the 30 units of coursework must be 600- or 700-level courses.
3. Geography 700 and 701, normally taken during the first two semesters.

Specific Requirements for the Master of Science Degree

(Major Code: 22061) (SIMS Code: 112991)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete a graduate program of at least 30 units of upper division and graduate courses selected with the approval of the master's advising committee. The department requires students to complete all degree requirements within seven years of the semester that they entered the M.S. program.

Concentration in Geographic Information Science

(SIMS Code: 112990)

1. A minimum of 30 units of which not more than six may be in disciplines other than geography and at least 15 units from 600- and 700-numbered courses in geography.
2. Geography 700 and 701.
3. A thesis in the area of geographic information science (Geography 799A).
4. Fifteen units from the following list of geographic information science courses: Geography 581 through 585, 587 through 589, 683 through 688L, 780.
5. Additional 500-, 600-, and 700-level coursework determined in consultation with the student's thesis adviser.

Concentration in Watershed Science

(SIMS Code: 112995)

1. A minimum of 30 units with no more than nine units from disciplines other than geography and at least 15 units from 600- and 700-numbered courses.
2. Geography 700 and 701.
3. A thesis in the area of watershed science (Geography 799A).
4. Geography 511 and six units of methods courses selected from Geography 581 through 585, 587 through 589, 683 through 688L, 780.
5. Advanced coursework (12 units) in watershed science to be determined in consultation with the student's adviser.
Section II. Doctoral Program  
http://geography.sdsu.edu

General Information  
(Major Code: 22061) (SIMS Code: 112901)

The cooperating faculties of the Department of Geography at San Diego State University and the University of California, Santa Barbara, offer a joint doctoral program in geography. The research interests of the participating faculty members cover a range of geographic problems. The joint doctoral program offers work leading to the Ph.D. in the following systematic areas (Group A) with supporting development of skills in spatial techniques (Group B) as previously listed.

Each student's program is designed around one of the areas selected from Group A and at least one of the technique emphases selected from Group B. Students must attain the requisite skills in programming, statistics, mathematics, and foreign language necessary to successfully pursue their research goals.

Admission to the Degree Curriculum

Applicants for admission to the doctoral program in geography offered jointly by SDSU and UCSC must meet the general requirements for admission to both universities with classified graduate standing as outlined in the respective current catalogs. There are no inflexible requirements for entrance to graduate study in this program, but a strong background in geography or a closely related field is essential. Admission to the program requires acceptance by the graduate deans and by the participating departments at UCSC and SDSU. Applications from outstanding students in other majors are encouraged, but such students should expect to take additional courses during their first year to improve their background. All students entering the program should have completed a lower and upper division statistics course and the appropriate mathematics and computer science courses for the specialty chosen.

Application. Deadline is February 1 for the upcoming fall semester. Application and notification beginning mid-March.

Applications must be received by the Department of Geography not later than February 1 for the Ph.D. program. A high undergraduate grade point average, normally 3.25 or higher for the last 60 units taken (90 quarter units), and/or a graduate grade point average of 3.50 or higher are required for admission. A minimum combined score of 1100 on the GRE is expected. Scores on both the verbal and quantitative sections of the GRE should exceed the 50th percentile.

Satisfaction of the minimum requirements at San Diego State University or the Department of Geography does not guarantee admission to the doctoral program.

Specific Requirements

Residency Requirements. After formal admission to the joint doctoral program, the student must spend at least one academic year in full-time residence on each of the two campuses. The definition of residence must be in accord with the regulations of UCSC and SDSU. Usually, the first year is spent at SDSU, the second at UCSC, 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 remedial steps. The advising committee will be the official advisory 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 specified 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 and core courses is required for the doctoral degree. However, students are expected to have a broad understanding of modern geographic principles in addition to a specialist’s competence in their own sub-field. In addition, all doctoral students must have computation skills and knowledge of spatial analysis.

Qualifying Examinations

Joint Doctoral Committee. When a doctoral student makes a definitive selection of the systematic area and technique emphasis as well as the general topic of 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 her/his 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 UCSC department. The committee may be augmented as needed by an additional member from outside geography at UCSC or a member of the faculty at SDSU from outside of geography or, when authorized, another university. Chaired by the student’s major professor, the joint doctoral committee shall be responsible for evaluating the dissertation proposal, administering and evaluating the qualifying examination, judging the dissertation, and administering and evaluating the dissertation defense.

Qualifying Examinations. The process of qualifying to write a Ph.D. dissertation has three steps. First, the student must take a written qualifying examination that normally consists of three portions devoted to: 1) the student’s substantive area, 2) her or his technical or methodological field(s) of interest, and 3) general geographic thought and inquiry. Second, the student prepares a dissertation proposal that describes the dissertation topic, summarizes the relevant background literature, and presents a comprehensive research plan for the dissertation. 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 UCSC for advancement to candidacy. Upon payment of the candidacy fee to UCSC, and after approval by the graduate deans of both campuses, students will be notified of their advancement to candidacy by the UCSC 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, will be determined jointly by the graduate deans and in accordance with regulations of the Divisions of Graduate Affairs.

Final Examination. The final examination, organized and administered by the joint doctoral committee, shall consist of a dissertation defense, before the joint doctoral committee. A public lecture will be presented in addition to this defense with the committee.

Award of the Degree. The Doctor of Philosophy degree in geography will be awarded jointly by the Regents of the University of California and the Trustees of The California State University in the names of both institutions.
Financial Support. The Department of Geography at SDSU has a number of research and teaching associateships available to support students admitted to the joint doctoral program. All students applying to admission to the joint doctoral program will be considered for financial support.

Courses Acceptable on Master's and Doctoral Degree Programs in Geography

(GEOG)

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

UPPER DIVISION COURSES

GEOG 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. Includes 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 558. Geographies of Poverty (3)
Prerequisite: Geography 354.
Geographic analysis of poverty in the United States: definitions and representations of poverty; spatial distribution and concentration; causes of poverty to include class, race, ethnicity, and gender; spaces of poverty (re)production such as neighborhoods, homes, schools, and workplaces; anti-poverty policies and responses.

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 Conservation Practice (3)
Prerequisite: Geography 370.
Management of environmental and natural resources. Effective programs and the institutional frameworks in which they occur.

GEOG 572. Land Use Analysis (3)
Prerequisite: Geography 370.
Problems of maintaining environmental quality in the process of land conversion from rural to urban uses with emphasis on land capability and suitability studies. Field trips may be arranged.

GEOG 573. Population and the Environment (3)
Prerequisite: Geography 102.
Population distribution, growth, and characteristics as they relate to environmental degradation, both as causes and consequences. Roles of women, sustainable development, carrying capacity, optimum population, and policy initiatives in relationships between population and environment.

GEOG 574. Water Resources (3)
Prerequisites: Geography 370 and 375.
Occurrence and utilization of water resources and the problems of water resource development. Field trips may be arranged.

GEOG 575. Geography of Recreational Land Use (3)
Prerequisite: Geography 101 or 102.
Importance of location and environment in the use, management, and quality of recreation areas. Field trips are required.

GEOG 581. Cartographic Design (3)
Two lectures and three hours of laboratory.
Prerequisite: Geography 381.
Computer-assisted map production techniques with emphasis on map design and color use.

GEOG 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, graphically 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 and atmospheres.

GEOG 589. GIS-Based Decision Support Methods (3)
Prerequisite: Geography 484.
Integration of Geographic Information Systems (GIS) with decision support techniques for problem-solving and decision-making. Public participation and collaborative use of GIS for location-based planning and resource management.
GEOG 595. Geographic Internship (3)  
Prerequisites: Six upper division units in geography and consent of instructor.  
Students will be assigned to various government agencies and industry and will work under the joint supervision of agency heads and the course instructor.

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

GRADUATE COURSES

GEOG 670. Environmental Conservation Theory (3)  
Prerequisite: Graduate standing. Theories and principles involved in natural and environmental resources management.

GEOG 683. Advanced Geographic Information Systems (3)  
Prerequisites: Geography 484 and Computer Science 108.  
Modeling of spatial phenomena in geographic information systems with geoprocessing techniques.

GEOG 683L. Geographic Information Systems Laboratory (1-2)  
Three to six hours of laboratory.  
Prerequisite: Concurrent registration in Geography 683. Data processing and analysis in geographic information systems. Applications of overlay functions in spatial analysis.

GEOG 688. Advanced Remote Sensing (3)  
Prerequisite: Geography 588. Sensor systems, image interpretation and geographic applications in thermal infrared and microwave remote sensing. Principles of digital image processing.

GEOG 688L. Advanced Remote Sensing Laboratory (1-2)  
Two or four hours of laboratory.  
Prerequisite: Concurrent registration in Geography 688. Processing and analysis of remotely sensed data. Laboratory training in sensor systems and digital image-processing methods including thermal infrared and microwave data analysis.

GEOG 696. Advanced Special Topics in Geography (3)  
Prerequisite: Consent of instructor. Advanced special topics in geography. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GEOG 700. Seminar in Geographic Research Design (3)  
Prerequisite: Graduate standing. Definition of spatial problems, hypothesis formulation and testing, selection of appropriate methodology. Development of research proposals, conduct of research, written and oral presentations.

GEOG 701. Seminar in Development of Geographic Thought (3)  
Prerequisite: Graduate standing. Evolution of concepts concerning the nature, scope, theories, and methodologies of geography.

GEOG 710. Seminar in Physical Geography (3)  
Prerequisite: Six units of upper division or graduate level courses in physical geography. Intensive study of an aspect of physical geography. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

GEOG 740. Seminar in Human Geography (3)  
Prerequisite: Six units of upper division or graduate level courses in human geography. Intensive study of a spatial aspect of human geography. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

GEOG 760. Seminar in Behavioral and Social Geography (3)  
Prerequisite: Six units of upper division or graduate level courses in behavioral or social geography. Intensive study of a spatial aspect of behavioral or social geography. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

GEOG 770. Seminar in Environmental Conservation (3)  
Prerequisites: Geography 670 and six units of upper division or graduate level courses in environmental or resource conservation. Natural and environmental resource conservation. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

GEOG 780. Seminar in Techniques of Spatial Analysis (3)  
Prerequisite: Six units of upper division or graduate level courses in spatial analytic techniques. Spatial analytic techniques from image processing, remote sensing, geographic information systems, cartography or quantitative methods. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

GEOG 797. Research (1-3) Cr/NC/RP  
Research in one of the fields of geography. Maximum credit six units applicable to a master’s degree.

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

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

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

DOCTORAL COURSES

GEOG 890. Independent Study for Doctoral Examination (1-9) Cr/NC  
Prerequisite: Consent of instructor or graduate adviser. Tutorial with student’s major professor in preparation for qualifying examinations. No unit credit allowed toward advanced degree. Maximum credit nine units.

GEOG 897. Doctoral Research (1-15) Cr/NC/RP  
Prerequisite: Admission to the doctoral program. Independent investigation in the general field of the dissertation.

GEOG 899. Doctoral Dissertation (1-15) Cr/NC/RP  
Prerequisites: Advancement to candidacy and an officially constituted dissertation committee. Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved. No unit credit allowed toward advanced degree.
Geological Sciences
In the College of Sciences

OFFICE: Geology/Mathematics/Computer Science 237
TELEPHONE: 619-594-5586 / FAX: 619-594-4372
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http://www.geology.sdsu.edu

Faculty
David L. Kimbrough, Ph.D., Professor of Geological Sciences, Chair of Department
Steven M. Day, Ph.D., Professor of Geological Sciences, The Rollin and Caroline Eckis Chair in Seismology
Eric G. Frost, Ph.D., Professor of Geological Sciences
Gary H. Girty, Ph.D., Professor of Geological Sciences
Kim Bak Olsen, Ph.D., Professor of Geological Sciences
Thomas K. Rockwell, Ph.D., Professor of Geological Sciences
Stephen A. Schellenberg, Ph.D., Associate Professor of Geological Sciences and Associate Dean of the Division of Undergraduate Studies
Kathryn W. Thorbjarnarson, Ph.D., Associate Professor of Geological Sciences (Graduate Adviser)
Shuo Ma, Ph.D., Assistant Professor of Geological Sciences
Barry B. Hanan, Ph.D., Resident Isotope Geochemist
Victor E. Camp, Ph.D., Geological Sciences

Adjunct Faculty
Margaret R. Eggers, Ph.D., Geological Sciences
John M. Fletcher, Ph.D., Geological Sciences
John A. Izbicki, Ph.D., Geological Sciences
Eleanora I. Robbins, Ph.D., Geological Sciences
Akhary K. Sinha, Ph.D., Geological Sciences

The Rollin and Caroline Eckis Chair in Seismology

A gift from Rollin and Caroline Eckis, combined with matching funds from the Atlantic Richfield Company and contributions from SDSU faculty and staff, established The Rollin and Caroline Eckis Chair in Seismology at SDSU. The late Rollin Eckis was former president of Richfield Oil Company and vice chairman of the board of the Atlantic Richfield Company. The first appointee to the chair, Dr. Steven M. Day, conducts research on the mechanics of earthquakes and earthquake hazards.

Associateships
Graduate teaching associateships in geological sciences are available to a limited number of qualified students. Application forms and additional information may be secured from the graduate adviser of the department. The program is designed to (1) prepare students for careers in consulting, domestic and multinational firms, and government agencies, (2) provide students with university-level teaching experience and access to community college teaching positions, and (3) provide advanced training in the earth sciences for students planning on entering a Ph.D. program.

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

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

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

Department of Geological Sciences
The following materials should be mailed or delivered to:
Department of Geological Sciences
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1020
(1) Department application available at: http://www.geology.sdsu.edu/gradprogram/applicants.htm;
(2) Two letters of reference.

All student applications are evaluated competitively and no fixed numerical standards automatically qualify or disqualify a student for graduate study in the Department of Geological Sciences. Students will be admitted on the basis of merit in relation to space and faculty availability.

Geological Sciences

Adancement 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 15 units must be selected from 600- and 700-numbered courses in the Department of Geological Sciences. Graduate students are required to complete Geological Sciences 602, up to six units of Geological Sciences 797 Research, and three units of Geological Sciences 798A 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.

Students specializing in Geophysics (SIMS Code: 775346) or Hydrogeology (SIMS Code: 775346) are also required to include 15 units of specialization courses. The geophysics specialization must include at least two of the following courses: Geological Sciences 630, 631, 632, 690, or 691. The hydrogeology specialization must include at least two of the following courses: Geological Sciences 651, 675, 676, or 677. In exceptional cases, this requirement may be waived at the discretion of the graduate adviser, provided a substitute course that enhances a coherent program in a specific professional area is included. The remaining nine units in the specialization must be selected from approved courses in the geological, mathematical, computational, physical, or engineering sciences, in consultation with the graduate adviser. The student is required to pass a final oral examination on the thesis.

Geophysics

(Major Code: 19160) (SIMS Code: 775370)

General Information

The cooperating faculties of the Department of Geological Sciences at San Diego State University and the Geophysics Curricular Program of the Scripps Institution of Oceanography Graduate Department at the University of California, San Diego offer a joint doctoral program in geophysics. The complementary specialties of the two groups result in two focus areas: earthquake science and applied geophysics. Each student's program is designed around one of these two areas.

Admission to Doctoral Study

Applicants for admission to the doctoral program in geophysics offered jointly by SDSU and UCSD must meet the requirements as outlined under General Requirements for Doctoral Degrees given in Part Four of this bulletin. Admission into the program requires acceptance by the graduate deans and by the participating departments at UCSD and SDSU. Candidates for admission should have a bachelor's or master's degree in physics, mathematics, earth science, or equivalent training; degrees in engineering science are also accepted. The student's preparation should include:

1. Mathematics through differential and integral calculus.
2. Physics, one year with laboratory (the course should stress the fundamentals of mechanics, electricity, magnetism, optics, and thermodynamics, and should use calculus in its exposition).
3. Chemistry, one year with laboratory.
4. An additional year of physics, chemistry, or mathematics.

Students seeking admission to the joint doctoral program in geophysics should electronically submit the university application available at http://www.csumentor.edu. Application deadlines and contact information for the joint doctoral program coordinator are available at http://geology.sdsu.edu.

In addition, all applicants must submit the following admissions materials separately to SDSU Graduate Admissions and to the Department of Geological Sciences, San Diego State University.

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 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).

Department of Geological Sciences

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**

A 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, comprehension of required subject material and of the pertinent interactions. Part of the examination is based on the knowledge of a number of assigned journal articles. The oral examination includes a discussion of the student's research progress.

**Qualifying Examinations**

**Joint Doctoral Committee**

After the student has passed the departmental examination, a joint doctoral committee will be appointed. The joint doctoral committee must be formed before the student may proceed to the qualifying examination. The student will select a dissertation supervisor (major professor), who will chair the joint doctoral committee. The joint doctoral committee shall be composed of at least four members of the joint doctoral program faculty, two from the SDSU department and two from the UCSD department. The committee may be augmented as needed by an additional member from outside geophysics at UCSD or a member of the faculty at SDSU from outside of geophysics or, when authorized, another university. The joint doctoral committee shall be responsible for evaluating the dissertation proposal, administering and evaluating the qualifying examination, judging the dissertation, and administering and evaluating the dissertation defense.

**Qualifying Examination**

The joint doctoral committee will determine the student’s qualifications for independent research by means of a qualifying examination which will be administered no later than the end of the third year. The qualifying examination is an exploration of the research project, its feasibility, originality and appropriateness. The student must write a concise report describing his or her proposed original research project and give an oral presentation to the joint doctoral committee covering the planned work and any progress to date. The student's joint doctoral committee will conduct the oral qualifying examination to ensure that the student possesses the full knowledge and competence required to carry out her or his dissertation research proposal. Passing the oral presentation and defense of this proposal signifies that the doctoral dissertation proposal is approved.

Upon satisfactory completion of the oral qualifying examination and prescribed coursework, the student must apply to the graduate dean at UCSD for advancement to candidacy. Upon payment of the candidacy fee to UCSD, and after approval by the graduate deans of both campuses, students will be notified of their advancement to candidacy by the UCSD graduate dean.

**Dissertation**

Following the successful completion of all prescribed coursework and qualifying examination, the major remaining requirement for the Ph.D. degree will be the satisfactory completion of a dissertation consisting of original research of publishable quality carried out under the guidance of the major professor. Approval of the completed dissertation by the joint doctoral committee implies that an organized investigation yielding substantial conclusions of interest which expand the frontiers of knowledge and understanding in the discipline has been carried out. Results must be reported in a manner demonstrating the ability of the candidate to effectively prosecute and report independent investigation.

The requirement for completing and filing the dissertation, including the number of copies required, will be decided jointly by the graduate deans and in accordance with regulations of the Graduate Division.

**Final Examination**

The final examination, organized and administered by the joint doctoral committee, shall consist of a dissertation defense, before the joint doctoral committee with the public invited.

**Award of the Degree**

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

**Financial Support**

The Department of Geological Sciences at SDSU has teaching assistantships and fellowships available on a competitive basis and research assistantships and internships are available from research grants and contracts or through industry contacts. All students applying for admission to the joint doctoral program will be considered for financial support.

**Faculty**

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

**San Diego State University:**

Committee Members: Agnew, Bock, Constable, Dorman, Fialko, Harding, Minster, Sandwell, Shearer, Vernon.

**University of California, San Diego:**

Committee Members: Day, Ma, Olsen, Rockwell.
Courses Acceptable on Master’s and Doctoral Degree Programs in Geological Sciences (GEOL)

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

UPPER DIVISION COURSES

GEOL 505. Imaging and GIS in Disaster Response (3)
Two lectures and three hours of laboratory. Prerequisite: Geological Sciences 200 or enrollment in homeland security program. Imaging and Geographic Information Systems applications in disaster management.

GEOL 508. Advanced Field Geology (4 or 6)
One lecture and three hours of laboratory plus 28 days in the field. For the option with six units: two additional weeks of field laboratory work. Prerequisite: Geological Sciences 306. Investigation of individually assigned areas, preparation of geologic maps, geologic sections, and gathering other types of data, e.g., petrologic, geophysical, or paleontologic, as appropriate. Students are responsible for cost of food and transportation. Students must demonstrate the physical ability to adequately and safely perform fieldwork under varying weather conditions; in steep, uneven or rocky terrain; for long periods of time.

GEOL 514. Process Geomorphology (3)
Two lectures and three hours of laboratory. Prerequisite: Geological Sciences 306. Processes shaping and affecting the earth’s surface, and application of resultant land forms in interpretation of geologic structure, stratigraphy, and neotectonics.

GEOL 520. Economic Geology (3)
Prerequisite: Geological Sciences 200. Origin and distribution of mineral deposits, economic considerations involved in their recovery, and assessment of available reserves.

GEOL 521. Petroleum Geology (3)
Prerequisite: Geological Sciences 336. History of petroleum exploration; statistics of energy use; principles of well logging; theories of petroleum generation, migration, and accumulation; exploration and production techniques; case studies of important oil fields.

GEOL 530. Geochemistry (3)
Two lectures and three hours of laboratory. Prerequisites: Geological Sciences 324; Chemistry 201; Mathematics 150. Fundamental principles of low- and high-temperature geochemistry. Origin of the elements; formation of the solar system; differentiation of the earth; weathering at the earth’s surface; chemistry of natural waters. Laboratory methods applied to geological problems.

GEOL 533. Geophysical Analysis (3)
Two lectures and three hours of laboratory. Prerequisites: Geological Sciences 307, Mathematics 252, Physics 197. Recommended: Physics 195L, 196L, 197L. Analog and digital data collection, processing, modeling and error estimation. Computer-aided examples and field tests from seismics, gravity, magnetics, and electromagnetics including magnetotellurics.

GEOL 537. Geobiology (3)
Two lectures and three hours of laboratory. Prerequisites: Geological Sciences 205 and either Biology 100-100L, 101-101L, or 203-203L and Geological Sciences 336. Principles of paleontology, including ecology and evolution. Tools of paleontology, including biomechanics, shape analysis, phylogeny, population analysis, study of biogeographic, temporal, and environmental distribution. Focus on using biology to solve geologic problems and vice versa.

GEOL 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 dams, tunnels, cut slopes, and buildings.

GEOL 551. Hydrogeology (3)
Two lectures and three hours of laboratory. Prerequisites: Mathematics 150. Theory of ground water flow. Exploration for and development of the ground water resource. Aquifer tests, water quality, and water resource management. Occurrence of water in alluvial, sedimentary, volcanic, plutonic, and metamorphic terrains.

GEOL 560. Earthquake Seismology (3)
Two lectures and three hours of laboratory. Prerequisites: Mathematics 252, Physics 197. Recommended: Mathematics 342A. Theory of seismic wave excitation, propagation, and recording. Methods of seismogram interpretation and analysis. Applications to tectonics and earthquake hazard analysis.

GEOL 580. Seismic Interpretation and 3D Visualization (3)
Two lectures and three hours of laboratory. Prerequisite: Geological Sciences 306. Computer-based seismic interpretation, mapping, and modeling in both 2D and 3D. Overview of basic seismic processing. Emphasis on industrial applications, both petroleum and shallow geotechnical.

GEOL 596. Advanced Topics in Geology (1-4)
Prerequisite: Consent of instructor. Advanced special topics in the geological sciences. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Credit six units applicable to a master’s degree.

GRADUATE COURSES

GEOL 600. Seminar (1-3)
Refer to Class Schedule for lecture/laboratory format. Prerequisite: Consent of instructor. An intensive study in advanced geology. May be repeated with new content. Topic to be announced in the Class Schedule. Maximum credit six units applicable to a master’s degree.

GEOL 602. Research Forum (3)
Prerequisite: Consent of department. Identification of an original research project and collection of preliminary data. Oral presentation of a written proposal.

GEOL 622. Seminar: Sedimentary Basin Analysis (3)
Prerequisite: Geological Sciences 336. Stratigraphy and sedimentology of sedimentary basins and geologic controls. Topics include stratigraphic and sedimentologic tools, facies analysis, subsurface basin mapping, cyclicity, tectonic models, and economic resources.

GEOL 630. Selected Topics in Geophysics (3)
Prerequisite: Consent of instructor. Research topics in seismics, 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 635. Petrology of Terrigenous Rocks (3)
Two lectures and three hours of laboratory.
Prerequisite: Geological Sciences 336.
Thin-section and hand-specimen description and classification of sandstones, conglomerates, and mudrocks. Emphasis on mineralogy, provenance, diagenesis, and paleogeographic reconstructions.

GEOL 640. Geotectonics (3)
Prerequisites: Geological Sciences 306; Physics 180B or 196.
Combination of plate tectonics, structural geology, and geophysics. Topics in continental genesis and evolution, orogeny, plate tectonics theory, and a survey of classic plate boundaries.

GEOL 642. Neotectonics (3)
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 306 and 514.
Observation, interpretation and significance of late Quaternary crustal deformation.

GEOL 645. Advanced Structural Geology (3)
Prerequisite: Geological Sciences 306.
Topics in advanced structural geology in the light of petrographic, geophysical, and experimental data, combined with classic field observations.

GEOL 651. Applied Groundwater Flow Modeling (3)
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 551 and experience in computer programming.
Analytical and numerical computer modeling of unsaturated and saturated flow. Application of MODFLOW to analyze groundwater hydrologic sciences.

GEOL 660. Isotope Geology (3)
Prerequisite: Geological Sciences 530.
Fundamental principles of isotope geochemistry and geochronology. Use of stable and radiogenic isotopic systems to study the earth. Instrumental methods of isotopic analysis.

GEOL 675. Groundwater Geochemistry (3)
Prerequisites: Chemistry 201 and Mathematics 150.
Processes affecting inorganic solutes in groundwater. Applications to groundwater geochemical evolution, weathering processes, and inorganic contaminant transport.

GEOL 676. Aquifer Characterization and Solute Transport (3)
Prerequisite: Geological Sciences 551.
Theory and practice of aquifer characterization by hydraulic aquifer tests and tracer tests. Modeling of advection, dispersion, sorption, and transformation of dissolved solids.

GEOL 677. Environmental Fate of Organic Contaminants (3)
Two lectures and three hours of laboratory.
Prerequisites: Geological Sciences 551 and 530, or chemistry background.
Physical and chemical properties and processes affecting distribution of organic contaminants in the environment. Focus on subsurface environments with applications to surface waters.

GEOL 686. Advanced Igneous Petrology (3)
Prerequisite: Geological Sciences 324.
Physical and chemical processes within earth's mantle and crust leading to generation of igneous rocks in variable tectonomagmatic environments. Not open to students with credit in Geological Sciences 600. Seminar: Advanced Igneous Petrology.

GEOL 687. Volcanology (3)
Prerequisite: Geological Sciences 324.
Chemical and physical properties of magma; generation, rise, and storage of magma. Eruptive mechanisms, volcano types, and a variety of volcanic phenomena associated with Hawaiian, Strombolian, Plinian, volcanic, and hydrovolcanic eruptions.

GEOL 690. Earthquake Physics I (3)
Prerequisite: Geological Sciences 560. Recommended: Mathematics 342B.
Structure and theology of fault zones as inferred from geological and geophysical observations. Stress state and frictional behavior of faults, stress interaction models, thermal, and hydrological properties of fault zones. Mechanics and energy budget of earthquakes.

GEOL 691. Earthquake Physics II (3)
Prerequisites: Geological Sciences 560 and 690. Recommended: Mathematics 342B.
Theoretical and numerical models of earthquake rupture and wave propagation, with applications to ground motion prediction and seismic hazard estimation. Collective behavior of fault networks, seismicity models, earthquake predictability; application to earthquake forecast models.

GEOL 750. Research and Technical Writing (3) Cr/NC
Prerequisites: Geological Sciences 602 and 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: Geological Sciences 602, an officially appointed thesis committee, and advancement to candidacy.
Preparation of a thesis for the master’s degree.

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

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

DOCTORAL COURSES

GEOL 897. Doctoral Research (1-15) Cr/NC/RP
Prerequisite: Admission to doctoral program. Independent investigation in general field of the dissertation.

GEOL 898. Doctoral Special Study (1-8) Cr/NC/RP
Prerequisite: Admission to doctoral program. Individual study in field of specialization. Maximum credit eight units applicable to doctoral degree.

GEOL 899. Doctoral Dissertation (1-15) Cr/NC/RP
Prerequisite: An officially constituted dissertation committee and advancement to candidacy.
Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.
German

In the Department of European Studies
In the College of Arts and Letters

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
Kristin Rebien, Ph.D., Associate Professor of German
Mary M. Wauchope, Ph.D., Associate Professor of German

General Information
The Department of European Studies offers advanced coursework
in German. Graduate courses in German may be used to fulfill require-
ments 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 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
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 Sched-
ule 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 pre-
requisite 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 appli-
cable 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 119
TELEPHONE: 619-594-6865 / FAX: 619-594-5991
Director of School: Thomas F. Reilly, D.P.A.

Faculty
Mario D. Garrett, Ph.D., Professor of Social Work
Anita S. Harbert, Ph.D., Professor of Social Work, Emeritus
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 interdisciplinary faculty from several departments. The program is administered by the School of Social Work. The primary goal of the Gerontology Graduate Program is to offer high-quality interdisciplinary education and training that focus on the core areas of gerontology such as theories of aging, aging policy, long-term care, research methodology, design, development, administration, and evaluation of programs for the aged. The program is committed to preparing students to enter positions in administration and management in a variety of organizations serving older adults. This goal will be accomplished by offering coursework and field experience aimed at providing the necessary knowledge and skills to encourage/promote gerontology competencies and evidence-based administration and management as related to older adults.

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:

School of Social Work
(Attention: Gerontology Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4452

(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>Units</th>
<th>Description</th>
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<tbody>
<tr>
<td>GERO 520</td>
<td>3</td>
<td>Analysis of Programs for the Aging</td>
</tr>
<tr>
<td>GERO 601</td>
<td>3</td>
<td>Theory and Application in Gerontology and Aging</td>
</tr>
<tr>
<td>GERO 605</td>
<td>3</td>
<td>Long-Term Care</td>
</tr>
</tbody>
</table>
GERO 601. Theory and Application in Gerontology and Aging (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 690. Seminar in Research Methods for Social Work and Gerontology (3)
Prerequisite: Consent of instructor. Research development, design, and methodology. Application to social work and gerontology in testing theories, advancing practice knowledge, and decision-making.

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.

GERO 740. Advanced Seminar in Administration and Community Development in Social Work and Gerontology (3)
(Same course as Social Work 740)
Prerequisites: Social Work 632 and concurrent registration in Gerontology 700A or Social Work 755. Human services program design, strategic planning, marketing, organizational performance management, human resource management, and development of grant proposals.

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 (Plan A) OR
GERO 790B. Practicum (Plan B)
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.

GERO 820. Application of Programs for the Aging (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 821. Research Methods and Evaluation (3)
Prerequisites: Course in elementary statistics and satisfaction of the Entry-Level Mathematics requirement. Recommended: Sociology 201. Research methodology, assessment, and evaluation of gerontology. Basic statistical techniques in evaluating gerontology databases. Methods, statistical procedures, hypothesis testing, evaluation, use of tables and graphs, and use of gerontology databases. SPSS using gerontology databases for instruction.

GERO 822. International Issues on Aging (3)
Prerequisite: Three units in gerontology. Socio-economic implications of rapidly growing number and proportion of older people around the world. Comparative study of aging populations in different countries, analysis and evaluation of related policies and programs.

GERO 890. Seminar in Research Methods for Social Work and Gerontology (3)
(Same course as Social Work 890)
Basic statistical techniques in evaluating gerontology databases. SPSS using gerontology databases for instruction.

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

UPPER DIVISION COURSES
GERO 520. Analysis of Programs for the Aging (3)
Prerequisite: One upper division course in gerontology. Major programs in aging that support daily functioning of elderly. Effectiveness of programs in serving today's elderly with attention to ethnic and cross-cultural variations.

GERO 522. International Issues on Aging (3)
Prerequisite: Three units in gerontology. Socio-economic implications of rapidly growing number and proportion of older people around the world. Comparative study of aging populations in different countries, analysis and evaluation of related policies and programs.

GERO 596. Advanced Special Topics in Gerontology (1-4)
Advanced selected topics in gerontology. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES
GERO 601. Theory and Application in Gerontology and Aging (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 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.

GERO 690. Seminar in Research Methods for Social Work and Gerontology (3)
(Same course as Social Work 690)
Research development, design, and methodology. Application to social work and gerontology in testing theories, advancing practice knowledge, and decision-making.

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.

GERO 740. Advanced Seminar in Administration and Community Development in Social Work and Gerontology (3)
(Same course as Social Work 740)
Prerequisites: Social Work 632 and concurrent registration in Gerontology 700A or Social Work 755. Human services program design, strategic planning, marketing, organizational performance management, human resource management, and development of grant proposals.

GERO 797. Research (1-3) Cr/NC/RP
Prerequisite: Consent of instructor. Research in an area of gerontology. Maximum credit six units applicable to a master's degree.

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

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

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

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

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History
In the College of Arts and Letters

OFFICE: Arts and Letters 588
TELEPHONE: 619-594-5262 / FAX: 619-594-2210
http://www.rohan.sdsu.edu/dept/histweb/dept.html

Faculty
Joanne M. Ferraro, Ph.D., Professor of History, Chair of Department
Edward Beasley, Ph.D., Professor of History
Elizabeth Cobbs Hoffman, Ph.D., Professor of History, The Dwight E. Stanford Chair in American Foreign Relations
Sarah E. Elkind, Ph.D., Professor of History
Eve Kornfeld, Ph.D., Professor of History
Mathew S. Kueller, Ph.D., Professor of History
Andrew Wiese, Ph.D., Professor of History
Stephen A. Colston, Ph.D., Associate Professor of History
Paula S. De Vos, Ph.D., Associate Professor of History (Graduate Adviser)
Kathryn J. Edgerton-Tarpley, Ph.D., Associate Professor of History
Thomas P. Passananti, Ph.D., Associate Professor of History
Elizabeth Ann Pollard, Ph.D., Associate Professor of History
John C. Putman, Ph.D., Associate Professor of History
Chiou-Ling Yeh, Ph.D., Associate Professor of History
Andrew J. Albalahin, Ph.D., Assistant Professor of History
Edward J. Blum, Ph.D., Assistant Professor of History
Sandra S. Campbell, Ph.D., Assistant Professor of History
Andrew J. Abalahin, Ph.D., Assistant Professor of History
Sarah S. Elkind, Ph.D., Professor of History
Kathryn J. Edgerton-Tarpley, Ph.D., Associate Professor of History
Thomas P. Passananti, Ph.D., Associate Professor of History

The Dwight E. Stanford Chair in American Foreign Relations
A gift from alumnus Dwight E. Stanford, who earned a bachelor's degree in American history in 1936 from San Diego State College (now SDSU), established The Dwight E. Stanford Chair in American Foreign Relations. The holder of the chair is Elizabeth Cobbs Hoffman, a distinguished scholar-teacher who is an expert on economic and political relations between the United States and the Third World, and on the history of the Cold War.

The Nasatir Professor of Modern Jewish History
The Nasatir Professorship was established in honor of the late Professor Abraham Nasatir, a specialist in European colonial history in North America. Nasatir taught history at SDSU for 46 years and was active in the community as an advocate of Jewish education. The Professorship is now held by a distinguished scholar of European intellectual history and Holocaust studies, Lawrence Baron.

Master of Arts Degree in History

Scholarships
The Kenneth and Dorothy Stott Scholarship is awarded each June to a student who has attended San Diego State University for at least two years and who is being graduated or who has been graduated by San Diego State University with a major in history. The recipient must continue work at San Diego State University, or at any other accredited college or university, toward a higher degree or credential. The selection is made by the Department of History with approval of the committee on scholarships.

General Information
The Department of History offers graduate study leading to the Master of Arts degree in history.

The Master of Arts degree is designed to provide advanced training for (1) students who plan to terminate their graduate studies at the master's level, (2) those who anticipate further study leading to a doctoral degree in history or related fields, and (3) those who plan to teach history at the secondary or community college levels.

Research facilities include a substantial library of well over one million titles and an impressive periodical collection. The library is the depository for the documents of the United States and the state of California, and receives all publications of the United Nations and the Organization of American States. The library also houses 1,500 linear feet of manuscript materials as well as audiorecords, films, oral histories, and photographs of the greater San Diego area. The College of Arts and Letters houses the Social Science Research Laboratory which includes a well-equipped data processing center. The San Diego Historical Society and the San Diego Public Library contain many manuscript collections pertinent to local history. Located north of San Diego is the National Archives and Records Administration at Laguna Niguel.

Admission to Graduate Study
All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. As an additional requirement, the student must have completed a bachelor's degree with an undergraduate major in history or have taken enough units in history and related fields to demonstrate sufficient preparation for the program. The minimum grade point average required for application to the M.A. program in history is 2.85 in an acceptable baccalaureate degree or in the last 60 semester (90 quarter) units attempted and 3.0 in the major (not necessarily history), plus a satisfactory score on the GRE General Test (minimum 500 verbal score). Applicants holding an acceptable post-baccalaureate degree earned at an institution accredited by a regional accrediting association also meet minimum qualifications.

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

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

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

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

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

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

Department of History
The following materials should be mailed or delivered to:
Department of History
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-8147
(1) A statement of purpose of approximately 400 words;
(2) Two academic letters of recommendation (in sealed envelopes, signed across the seal).

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy, as stated in Part Four of this bulletin, as well as the specific requirements of the department. All students should consult the graduate adviser.

Specific Requirements for the Master of Arts Degree in History
(Major Code: 22051) (SIMS Code: 113301)
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete a graduate program of 30 units which includes a major consisting of at least 24 units in history from courses listed below as acceptable on the master's degree programs, at least 18 units of which must be in 600- and 700-numbered courses. Students may elect either Plan A, requiring a thesis, or Plan B, requiring a comprehensive written examination in two fields of history chosen in consultation with the graduate adviser. Required courses are History 601, 665; six units selected from History 620, 630, 640, 650, or 680; History 797; and History 799A for those students electing Plan A. Students approved for Plan B shall meet the same course requirements as those enrolling in Plan A, except that they must enroll in History 795 (three units) and one additional three-unit history course numbered from 620 to 680 in lieu of History 797 and 799A.
Candidates for this degree must demonstrate knowledge of a relevant foreign language. Course selection and programs must be approved by the graduate adviser prior to the student's registration.

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

UPPER DIVISION COURSES

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 Dark Ages (B) (3)
(Same course as Humanities 504)
Europe and the Mediterranean, sixth to eleventh centuries C.E. through various approaches: political, economic, social, and cultural. Topics include the barbarians and Vikings, the Byzantine, Arab, and Holy Roman Empires, the Norman Conquest, Charlemagne, Beowulf, feudalism, and serfdom. (Formerly numbered History 404.)

HIST 505. The Later Middle Ages (B) (3)
Europe and the Mediterranean 1100-1450 C.E. through various approaches: political, economic, social, and cultural. Development of kingdoms of western Europe and relationship to Byzantine empire and other states. (Formerly numbered History 405.)

HIST 506. The Renaissance (B) (3)
(Same course as Humanities 506)
Intellectual, artistic, social, and economic transformation in Europe from fourteenth to seventeenth centuries.

HIST 507. The Reformation (B) (3)
(Same course as Religious Studies 507)
Continental Europe, 1500-1648. Split of Christendom; political and intellectual dissent; social fabric of family life; relationship between gender, class, and power; cultural stratification of European society.

HIST 508. The Fall of the Roman Empire (B) (3)
Prerequisite: Upper division or graduate standing. History of Mediterranean region between third and sixth centuries C.E. Changes in society, politics, economics, the military, gender, sexuality, religion, literature, art, archaeology, and law. Competing perceptions of the period as one of “fall” versus one of “transformation.”

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 512B. The Age of Dictators and Contemporary Europe (C) (3)
Europe in the age of dictatorship, world war, decline, and recovery.

HIST 514. History of Science: From Revolution to Evolution (A) (3)
Prerequisite: Upper division or graduate standing. Development of early modern European science. Origins of Western concept of “science,” Greco-Roman and Arabic roots of science, impact of Renaissance humanism and voyages of exploration on Scientific Revolution, and imperial context of evolutionary theories and scientific racism.

HIST 515. 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.

HIST 534. Civil War and Reconstruction (C) (3)
Prerequisite: Upper division or graduate standing.
Civil War and Reconstruction, emphasizing political affairs and role of Abraham Lincoln.

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 537. Star Trek, Culture, and History (C) (3)
Prerequisite: Upper division or graduate standing.
Explores relationship between Star Trek’s several television series, movies, novels, and the larger historical and cultural context of post-World War II America. Themes include race, gender, sexuality, foreign policy, terrorism, religion, and politics.

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 540. Environmental History of the United States (C) (3)
(Offered only at IVC)
The relationship of Americans to their environment from colonial times to the present with emphasis on how attitudes and values have affected personal behavior and public policy toward the land.

HIST 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 553. 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 554. 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 555. 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 556. 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 557. 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 558. Colonial Mexico (B) (3)
Prerequisite: Upper division or graduate standing.
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 559. Topics in Urban History (A) (3)
Prerequisite: Upper division or graduate standing.
City, suburb, and urban social movements. Impact of Mao’s Revolution on everyday life in China, successes, limitations of China’s recent reform policies.

HIST 562. 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 563. 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 564. Topics in the History of War and Violence (A) (3)
Prerequisite: Upper division or graduate standing.
History of war and violence may include: Violence in Africa, modern genocide, trauma and modern East Asia, social suffering in historical perspective. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.

HIST 565. Civil War and Reconstruction (C) (3)
Prerequisite: Upper division or graduate standing.
Civil War and Reconstruction, emphasizing political affairs and role of Abraham Lincoln.

HIST 566. 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 567. 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 568. 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 569. Topics in Urban History (A) (3)
Prerequisite: Upper division or graduate standing.
City, suburb, 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 571. 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 572. 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 ad revolutionaries, intellectuals and society, families in former times, and American popular culture. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.

HIST 583. Topics in History of Gender and Sexuality (A) (3)
Prerequisite: Upper division or graduate standing.
Variable topics in history of gender and sexuality may include: Gay and Lesbian history, Asian American gender and sexuality, genders in Latin America. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.

HIST 584. Topics in Environmental History (A) (3)
Prerequisite: Upper division or graduate standing.
Variable topics in environmental history may include: Press, politics, environment, world environmental history, water and society. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.

HIST 585. History of the Sixties (C) (3)
Prerequisite: Upper division or graduate standing.
Variable topics in the history of the 1960s may include: America in the 1960s, Africa in the 1960s, politics and protests in 1960s, Europe in the 1960s. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units.

HIST 586. Topics in World History (A) (3)
Prerequisite: Upper division or graduate standing.
Major historical problems, themes, or topics from global, chronological, and geographical perspectives of world history to include frontiers, food and famine, violence and warfare, science, religion and magic, the Atlantic world, medieval era. See Class Schedule for specific topic. May be repeated with new content. Maximum credit six units. (Formerly numbered History 470.)

HIST 596. Selected Studies in History (A) (B) (C) (1-4)
Topics in various fields of history, such as biography, war, science, technology, urbanization, minority groups, immigration, and capitalism. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

NOTE: All graduate courses in the Department of History have a prerequisite of 12 units of upper division courses in history, or consent of the instructor.

HIST 601. Seminar in Historical Methods (3)
Historical methodologies, historiography, and critical analysis.

HIST 620. Directed Readings in European History (3)
Prerequisite: Consent of instructor. Selected readings in historical literature and primary sources in a designated area of European history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

HIST 630. Directed Readings in United States History (3)
Prerequisite: Consent of instructor. Selected readings in historical literature and primary sources in a designated area of United States history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

HIST 640. Directed Readings in Latin American History (3)
Prerequisite: Consent of instructor. Selected readings in historical literature and primary sources in a designated area of Latin American history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

HIST 650. Directed Readings in Asian History (3)
Prerequisite: Consent of instructor. Selected readings in historical literature and primary sources in a designated area of Asian history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

HIST 665. Seminar in History (3)
Prerequisites: History 601; six units selected from History 620, 630, 640, 650, or 680, three units of which may be taken concurrently; six additional units in history appropriate to student’s program; consent of instructor.
Directed research on topics selected from a designated area of history. Maximum credit six units applicable to a master’s degree.

HIST 680. Directed Reading in Selected Topics (3)
Prerequisite: Consent of instructor. Selected readings in comparative, interdisciplinary, and topical history. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

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

HIST 795. Area Studies in History (3) Cr/NC
Prerequisite: Advancement to candidacy. Preparation for the comprehensive examinations in two fields of history for those students taking the M.A. under Plan B. Maximum credit three units applicable to a master’s degree.

HIST 797. Research (3) Cr/NC/RP
Prerequisites: Advancement to candidacy and written approval of the History Department graduate adviser. Independent research in a specialized subject in history.

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

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

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

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

OFFICE: Industrial Technology 94
TELEPHONE: 619-594-4041 / FAX: 619-594-4065
http://homelandsecurity.sdsu.edu

Associated Faculty for Homeland Security
Eric G. Frost, Ph.D., Professor of Geological Sciences, Co-Director, Center for Homeland Security Technology Assessment, Co-Director of Homeland Security Program
Jeffrey S. McIlvain, Ph.D., Associate Professor of Public Affairs, Co-Director of Homeland Security Program
Stephanie Kay Brodine, M.D., Professor of Public Health, Division Head of Epidemiology and Biostatistics
Mary Ann Lyman-Hager, Ph.D., Professor of French, Co-Director of Language Acquisition Resource Center
Stanley R. Maloy, Ph.D., Professor of Biology and Dean of the College of Sciences
Cezar M. Ornatowski, Ph.D., Professor of Rhetoric and Writing Studies
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
Ming-Hsiang Tsou, Ph.D., Professor of Geography
Murray Jennex, Ph.D., Associate Professor of Management Information Systems
Khaleel Mohammed, Ph.D., Associate Professor of Religious Studies

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 at least two faculty recommendations. Students from outside of the program are considered on a case-by-case basis.

Students are encouraged to apply for the India program after completing at least nine units of graduate study at SDSU (six of these nine units must come from HSEC 601, 602, 603, or 604). A maximum of two semesters or 18 units can be earned by any student in the study abroad program during a two semester (eight month) stay in India. Although 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 take 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.

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Admission to Graduate Study

The homeland security program accepts admission for both the fall and spring semesters. The application deadlines are posted on the Web site at http://homelandsecurityprogram.sdsu.edu or can be obtained from the homeland security program directors or graduate adviser. All students must satisfy the general requirements for admission to the university with classified graduate standing as described in Part Two of this bulletin. In addition, students must demonstrate sufficient preparation for the program. This may include a bachelor’s degree in sciences, engineering, law enforcement, international security, public policy, or a related discipline providing educational preparation for a career in homeland security. The degree must be from an accredited institution or indicate completion of equivalent academic preparation as determined by the Graduate Dean. Evaluation of a student’s transcript will be made on an individual basis by the admissions committee to determine whether evidence of sufficient preparation can be demonstrated. A student whose preparation is deemed insufficient by the admissions committee may be admitted as conditionally classified and will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

The grade-point average required for admission to the master’s program in homeland security is 2.85 in undergraduate coursework plus satisfactory scores on the verbal and quantitative sections of the GRE. An interview by the admissions committee may also be required. Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee.

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Homeland Security Program.

Graduate Admissions

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

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

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

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

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

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

Homeland Security Program

The following materials should be mailed or delivered to:

Homeland Security Program Admissions Committee
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1020

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

(2) One letter of recommendation from a person in a position to judge professional ability and potential (in sealed, signed envelope);

(3) A two-page maximum personal statement giving reasons for choosing homeland security as a degree objective;

(4) A two-page maximum personal statement summarizing applicant’s qualifications, skill sets, and life experiences as they apply to the homeland security degree.

Advancement to Candidacy

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

Specific Requirements for the Master of Science Degree

(Major Code: 22102) (SIMS Code: 779001)

In addition to meeting the requirements for the Master of Science degree, as described in Part Four of this bulletin, students must complete 30 units of coursework in an officially approved course of study as outlined below. Students must earn a minimum grade point average of B (3.0) in the master’s program and no less than a C in each course.

Students may meet the culminating experience requirement through Plan A by completing H SEC 799A or through Plan B by completing H SEC 790 and successfully passing a comprehensive examination.

Graduate Program (30 units)

I. Core Courses (12 units)
   H SEC 601 Seminar in Homeland Security (3)
   H SEC 602 Seminar in Science, Technology, and Homeland Security (3)
   H SEC 603 Seminar in Emergency Preparedness and Response (3)
   H SEC 604 Seminar in Law, Society, and Homeland Security (3)

II. Homeland Security electives: Six units in consultation with program adviser.

III. Non-Homeland Security electives: Six units in consultation with program adviser.

IV. Study Abroad (3 units). All homeland security graduate students are required to complete a homeland security-related study abroad experience. To meet this requirement, students must complete one of the following with the preapproved and written consent of the program adviser:

1. H SEC 650 Homeland Security Study Abroad (3 or 6);
2. H SEC 652 Border Security: The Case of Mexico (3);
3. A CSU Study Abroad Program;
4. An SDSU Exchange Program;
5. An SDSU Semester Abroad Program;
6. An SDSU Travel Study Program;
7. A homeland security practicum, special topics, special study, or research conducted abroad.

See the program adviser to make arrangements to meet the study abroad requirement.

V. Plan A or Plan B (3 units). Students who complete Plan A, thesis or project option must include H SEC 799A in their program of study. Students who complete Plan B, non-thesis option must include H SEC 790 in their program of study and pass a comprehensive examination.

Courses Acceptable on Master’s Degree Program in Homeland Security (H SEC)

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

GRADUATE COURSES

H SEC 601. Seminar in Homeland Security (3)
Prerequisite: Classified graduate standing.
Domestic, national security, and foreign policies as they relate to prevention, deterrence, preemption, defense against, and response to terrorist attacks and other man-made and natural critical incidents and emergencies on local, regional, national, and international levels.
Prerequisite: Classified graduate standing.
Interrelationship of technology and science to homeland security policy. Use of technology and science for decision-making and collaboration. Ethical issues associated with application of technology and science to security.

H SEC 603. Seminar in Emergency Preparedness and Response (3)
Prerequisite: Classified graduate standing.
Practices of emergency management and response in civilian and military settings. Historical development of management of and response to emergencies and critical incidents. Interrelationship of public, private, and non-profit sectors on local, regional, national, and international levels.

H SEC 604. Seminar in Law, Society, and Homeland Security (3)
Prerequisite: Classified graduate standing.
Role and function of law related to homeland security on domestic and international levels. Historical development of ideas and rules of homeland security-related law and their relation to domestic and international legal, social, and political structures. Interrelationship of security, human, and civil rights.

H SEC 620. Seminar in Warfare and Homeland Security (3)
Prerequisite: Classified graduate standing.
Principles, rules, and laws of warfare. Offensive and defensive tactics and strategies related to homeland security. Relationship of warfare to grand strategy. Asymmetrical warfare tactics and strategies and their use to exploit power constraints inherent to democracies and the 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 the College of Extended Studies)
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 the College of Extended Studies)
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 the College of Extended Studies)
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 586 and 686 applicable to a master’s degree with approval of the graduate adviser.

H SEC 790. Directed Readings in Homeland Security (3)
(Offered only in the College of Extended Studies)
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.
Hospitality and Tourism Management

In the L. Robert Payne School of Hospitality and Tourism Management
In the College of Professional Studies and Fine Arts

OFFICE: Professional Studies and Fine Arts 436
TELEPHONE: 619-594-4964 / FAX: 619-594-4443
http://www.sdsu.edu/htm

Director of School: Carl Winston
Director of Graduate Program: J. Jeffrey Campbell

Faculty
Lawrence A. Beck, Ph.D., Professor of Hospitality and Tourism Management
Jesse T. Dixon, Ph.D., Professor of Hospitality and Tourism Management
Mark R. Testa, Ph.D., Professor of Hospitality and Tourism Management
Vinod Sasidharan, Ph.D., Associate Professor of Hospitality and Tourism Management
Katherine A. Spilde, Ph.D., Associate Professor of Hospitality and Tourism Management
Jess Ponting, Ph.D., Assistant Professor of Hospitality and Tourism Management

Master of Science Degree in Hospitality and Tourism Management
(Offered through the College of Extended Studies)

General Information
The L. Robert Payne School of Hospitality and Tourism Management offers a program of study leading to the Master of Science degree in hospitality and tourism management (HTM). This program is designed for upwardly mobile industry professionals desiring additional professional and advanced education to proceed to the next level of leadership as a director, general manager, or senior leader within a hospitality, tourism, or recreation organization or agency.

The degree curriculum focuses on the development of analytical, strategic leadership, and administrative/organizational skills specific to the industry and is designed to be innovative, unique, and forward thinking. A blended method of instruction using intensive, on-campus instruction complemented by online teaching and off-campus experiential activities and projects is specifically designed for professionals who wish to continue their education while maintaining their current positions within the industry. The program is also supported by six research centers and institutes to include the Center for Hospitality and Tourism Research; Sycuan Institute on Government Gaming; Center for Global Gaming Research; Institute for Meetings and Events; Center for Surf Research; and the Institute for Leisure and Tourism Management.

Admission to Degree Curriculum
In addition to meeting the criteria for admission to the university, applicants must also demonstrate significant experience in management-level positions in hospitality, recreation, or tourism organizations.

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 Hospitality and Tourism Management 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 or GMAT 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).

Hospitality and Tourism Management Program
The following materials should be mailed or delivered to:
Hospitality and Tourism Management
Admissions Committee
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4531

(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 hospitality and tourism management 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 hospitality and tourism management 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: 05081) (SIMS Code: 663120)

The Master of Science degree in Hospitality and Tourism Management is operated by the L. Robert Payne School of Hospitality and Tourism Management and is a specialized approach to graduate education for industry executives. The program is designed especially to meet the needs of mid-career executives who desire the necessary educational acumen for managing complex organizational systems in the hospitality, recreation, and tourism industry. Students in the program have an average of five to fifteen years of full-time professional work experience and four to eight years of managerial or equivalent experience in the hospitality, recreation, and/or tourism industry, and bring a wealth of knowledge and industry experience to the classroom. The program allows the faculty to tailor or customize the curricular content to meet student needs for various industry segments based on an initial appraisal or assessment completed prior to registering in classes. New students accepted for the M.S. degree in hospitality and tourism management are fully matriculated in the university and meet all university requirements as established by the Graduate Division. The degree is a 17-month program utilizing a blended instructional model in which students complete courses offered in an online format and also in intensive face-to-face sessions during residency periods on-campus, which are 7 days in length and offered at the beginning and conclusion of the program. The fee structure is unique to the program and unrelated to the usual San Diego State University fee schedule. Students should contact the L. Robert Payne School of Hospitality and Tourism Management 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 30 units of 600- and 700-numbered courses. These courses will be offered in a predetermined pattern for entering student cohorts. 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 12 units of coursework listed on the official program of study with a minimum grade point average of 3.0 (B).

Courses Acceptable on Master's Degree Program in Hospitality and Tourism Management (HTM)

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

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.

GRADUATE COURSES

HTM 601. Leadership Explorations and Applications in HTM (3)
Prerequisite: Admission to M.S. program in hospitality and tourism management. Concepts, theories, and techniques of leadership as applied to hospitality, tourism, and recreation organizations, and businesses. Experience in teamwork, interpersonal networks, managing change and conflict, controlling environmental factors.

HTM 602. Theoretical Foundations of Leadership and Management in HTM (3)
Prerequisite: Admission to M.S. program in hospitality and tourism management. Directed reading and discussion of textual materials designed as an underpinning for future coursework and analytical projects pertaining to leadership and management in the hospitality, tourism, and recreation professions.

HTM 651. Financial Analysis in HTM (3)
Prerequisites: Hospitality and Tourism Management 601 and 602. Financial decision-making in a hospitality/tourism/recreation context to include analysis of financial statements, capital projects, deploying capital effectively, asset management, battling marginal compression, return on investment, optimizing return performance. Case studies and projects provide practical experience.

HTM 653. Leading in Complex Human Systems in HTM (4)
Prerequisites: Hospitality and Tourism Management 601 and 602. Human side of leadership with a focus on individuals, teams, and networks in interdependent and complex organizational systems in hospitality and tourism management. Investigates adaptive leadership, culture development, and performance improvement within the context of organizational development and change.

HTM 655. Twenty-First Century Marketing in HTM (3)
Prerequisites: Hospitality and Tourism Management 601 and 602. Advanced concepts and theories of hospitality and tourism marketing in the context of the fast-evolving sub-field of services marketing. Application of advanced marketing strategies to a variety of HTM businesses and organizations nationally and internationally.

HTM 680. Mastering Technology in an HTM Operational Setting (3)
Prerequisites: Hospitality and Tourism Management 651, 653, 655. Systems, techniques, strategies, and foundations of technology in hospitality, tourism, and recreation businesses and organizations with emphasis on performance metrics and system adaptability. Project oriented coursework with opportunities for system analysis, integration, and design.

HTM 682. Sustainability in Hospitality, Tourism, and Recreation Organizations (2)
Prerequisites: Hospitality and Tourism Management 651, 653, 655. Development of a comprehensive sustainability management system incorporating marketing and communication, goal setting, developing performance indicators and metrics, benchmarking, and strategies for ongoing, measurable, sustainability performance improvement.

HTM 690. Systems Problems Resolution in HTM (3)
Prerequisites: Hospitality and Tourism Management 651, 653, 655. Project oriented course on solving real problems in hospitality, tourism, and recreation organizations and businesses.

HTM 696. Special Topics in Hospitality and Tourism Management (1-3)
Prerequisite: Classified graduate standing. Study in specific areas of hospitality and tourism management. 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.

HTM 780. Seminar: Strategy Development and Critical Analysis in HTM (3)
Prerequisites: Hospitality and Tourism Management 680, 682, 690. Case study analysis requiring command of all previously delivered program course material to include data analysis, effective teamwork and leadership, and overall organizational assessment.
**Hospitality and Tourism Management**

HTM 790. Directed Readings in Hospitality, Tourism, and Recreation Management (3)
Prerequisites: Hospitality and Tourism Management 680, 682, 690, and advancement to candidacy.
Preparation for the comprehensive examination for students in Plan B.

HTM 797. Research (1-3) Cr/NC
Prerequisites: Classified graduate standing and consent of instructor.
Supervised research in an area of hospitality and tourism management. Maximum credit three units of Hospitality and Tourism Management 790, 797, or 798 applicable to a master's degree.

HTM 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 Hospitality and Tourism Management 790, 797, or 798 applicable to a master’s degree.

HTM 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.

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**Information and Decision Systems**
Refer to “Business Administration: Management Information Systems” in this section of the bulletin.
Interdisciplinary Studies

Administered by the Division of Graduate Affairs

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. Students are admitted to interdisciplinary studies as conditionally classified students. Students admitted conditionally must submit an approved program of study within two semesters. If the proposed curriculum is not approved, the student will have the option of applying for admission to an alternative advanced degree program.

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 program as the vehicle for the 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 697. 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
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
Ronald J. Arceneaux, Ph.D., Associate Professor of Journalism and Media Studies
Bey-Ling Sha, Ph.D., Associate Professor of Journalism and Media Studies (Graduate Adviser)
Mei Zhong, Ph.D., Associate Professor of Journalism and Media Studies
Rebecca Coates Nee, Ed.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 media 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.

In addition to advertising, journalism, and public relations, research interests of faculty and students include media message 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, media studies, public relations, or a related 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 February 1 as a complete package directly to:

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

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

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

(2) GRE scores (http://www.ets.org, SDSU institution code 4682, department code 4503). All applicants must post a Graduate Record Examination (GRE) verbal score of 450 (old) or 150 (new) or higher; a GRE quantitative score of 450 (old) or 142 (new) or higher; a combined GRE verbal and quantitative score of 950 (old) or 295 (new) or higher; and a GRE writing assessment (GRE-W) of 4.0 (old and new) 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.
Journalism and Media Studies

School of Journalism and Media Studies

The following materials should be mailed or delivered by March 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 to enhance their careers in journalism, advertising, or public relations; who wish to pursue careers involving new media industries; who wish to teach at the community college level; or who wish to continue studies of mass communication and media at the doctoral level. Please see the School of Journalism and Media Studies Web site for the most current information.

Proficiency Requirements. Individuals must demonstrate relevant undergraduate coursework for their desired area of focus within the specialization. Individuals without adequate preparation may be asked to take proficiency courses. Specific proficiency courses will be determined in consultation with the graduate adviser after admission to the program.

Graduate Courses. Students may select Plan A, 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 506, 529, 550, 560, 574, 581, 585, 589, 590, 591, 595, 596, 620, 696, 701, 710, 775, 780, 785, 798, and nine units -relevant to the specialization selected with the approval of the graduate adviser. No more than nine units may be taken outside the School of Journalism and Media Studies. No more than six units may be taken as special study (798). No more than 12 units taken at the 500-level may count toward the degree.

Courses Acceptable on Master's Degree

Programs in Journalism and Media Studies (JMS)

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

UPPER DIVISION COURSES

JMS 506. Advertising and Society (3)  
Prerequisite: Admission to a major 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.

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.

JMS 555. Online Newsroom (3)  
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, 460, 462 with grades of C (2.0) or better in each course. Admission to advertising emphasis, Major Code: 06041. Proof of completion of prerequisites required: Copy of transcript.

JMS 562. Advertising Creative (3)  
One lecture and four hours of activity. Prerequisites: Journalism and Media Studies 310W, 460, 462 with grades of C (2.0) or better in each course. Admission to advertising emphasis, Major Code: 06041. Proof of completion of prerequisites required: Copy of transcript.

JMS 565. Advertising Campaigns (3)  
Prerequisites: Journalism and Media Studies 560, 562 with grades of C (2.0) or better in each course.

JMS 574. International Advertising (3)  
Prerequisite: Admission to a major in the School of Journalism and Media Studies.

Comparative cultural, economic, legal, political, and social conditions relevant to international advertising.
JMS 581. Applied Research in Public Relations (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 emphasis, Major Code: 05992. Proof of completion of prerequisites required: Copy of transcript.
Qualitative and quantitative methods used in research to plan, track, evaluate public relations and communication practices. 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 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 590. Seminar in Crisis Communication in PR Management (3)
Prerequisite: Upper division standing or graduate standing.
Theory, research, practice of crisis communication in public relations; development of crisis management plans; critical examination of classic/contemporary crisis management cases, both domestic and international.

JMS 591. Global Telecommunications (3)
Prerequisite: Admission to a major in the School of Journalism and Media Studies. Proof of completion of prerequisite required: Copy of transcript.
Economic, social, and political shifts in the global economy as a result of digital communication. Emergence of new national and international media policies to stimulate creativity and innovation as central factors in development.

JMS 595. Seminar in Theoretical Approaches to Public Relations (3)
Prerequisite: Journalism and Media Studies 585 with grade of C (2.0) or better, or graduate standing.
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 620. Seminar: Quantitative Methods in Media Research (3)
Prerequisites: Journalism and Media Studies 600A and 600B. 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 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 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 785. Seminar: Advertising Research (3)
Prerequisites: Journalism and Media Studies 600A and 600B. Advanced topics in theory, design, and utilization of advertising research.

JMS 798. Special Study (1-3) Cr/NC/RP
Prerequisites: Journalism and Media Studies 600A and 600B. Contract required. Arranged with graduate coordinator in area of study. Individual study. Maximum credit six units applicable to a master’s degree.

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

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

JMS 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program courses. Registration required of students whose only requirement is completion of the comprehensive examination for the master’s degree. Registration in 799C limited to two semesters.
In the School of Exercise and Nutritional Sciences
In the College of Health and Human Services

OFFICE: Exercise and Nutritional Sciences 351
TELEPHONE: 619-594-5541
http://ens.sdsu.edu

Director of School: Fred W. Kolkhorst, Ph.D.

Faculty
Susan S. Levy, Ph.D., Professor of Exercise and Nutritional Sciences
Mitchell J. Rauh, Ph.D., P.T., Professor of Exercise and Nutritional Sciences
Laila Alibiglou, Ph.D., P.T., Assistant Professor of Exercise and Nutritional Sciences
Daniel J. Goble, Ph.D., Assistant Professor of Exercise and Nutritional Sciences

Associateships and Assistantships
Graduate teaching associateships are available for a limited number of qualified students. These provide essential education, technical training, and creative experience necessary for future professional and scholarly activity or college-level teaching. Graduate assistantships are also available in some cases to aid faculty research. Application blanks and additional information on graduate programs may be obtained from the School of Exercise and Nutritional Sciences Web site at http://ens.sdsu.edu.

General Information
The School of Exercise and Nutritional Sciences offers graduate study leading to the Master of 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 kinesanthropometry 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 kinesiology (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 (old GRE score) or 151 (new GRE score) on the verbal and 475 (old GRE score) or 142 (new GRE score) on the quantitative sections of the GRE 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: 556535)

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 acceptable in master’s degree programs in kinesiology, of which at least 18 units must be in 600- and 700-numbered courses. Also, students can complete their degree by choosing either Plan A or Plan B. If students select Plan A, Exercise and Nutritional Sciences 790A (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 with a specialization in rehabilitation science 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. Students are required to take mandated core courses and select a number of electives. The offerings in a specialization allow a student to achieve a certain competencies once the degree has been completed.

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: 556581)

Admission currently suspended for the Specialization in Exercise and Sport Psychology

Students take coursework that develops a knowledge base for the application of psychology in exercise and sports settings. Students with previous experience in coaching, health or fitness settings, or psychology will find the program of particular interest. (NOTE: Only fall semester admissions are accepted with a February 1 deadline.)

Required courses for the 30-unit program:

ENS 601 Experimental Methods in Exercise and Nutritional Sciences (3)
ENS 602 Research Evaluation in Exercise and Nutritional Sciences (3)
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 790 Seminar in Directed Readings (3) Cr/NC
ENS 799A Thesis (3) Cr/NC/RP

Electives: Nine units to be selected in consultation with a specialization adviser.

Specialization in Rehabilitation Science

(SIMS Code: 556542)

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 for the 30-unit program:

ENS 601 Experimental Methods in Exercise and Nutritional Sciences (3)
ENS 602 Research Evaluation in Exercise and Nutritional Sciences (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 – Kinetics (3)
ENS 612 Biomechanics: Measurement Techniques III – EMG (3)
ENS 613 Motor Control and Rehabilitation Science (3)

Electives: Six units to be selected in consultation with a specialization adviser.

Plan A

ENS 790 Seminar in Directed Readings (3) Cr/NC
ENS 799A Thesis (3) Cr/NC/RP

Electives: Nine units to be selected in consultation with a specialization adviser.

Plan B

ENS 790 Seminar in Directed Readings (3) Cr/NC
ENS 799A Thesis (3) Cr/NC/RP

Courses Acceptable on Master’s Degree Programs in Kinesiology (ENS)

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

UPPER DIVISION COURSES

ENS 500. Seminar in Neurophysiological and Mechanical Bases of Therapeutic Exercise (3)
Prerequisites: Exercise and Nutritional Sciences 365, 463, 463L. Mechanical and neurophysiological framework for therapeutic exercise interventions. Applications to clinical practice.
ENS 596. Selected Topics in Exercise and Nutritional Sciences (1-3)
Selected topics in exercise and nutritional sciences. May be repeated with new content and approval of instructor. See Class Schedule for specific content. Limit of six units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

ENS 601. Experimental Methods in Exercise and Nutritional Sciences (3)
Prerequisite: Undergraduate statistics course. Experimental methods in exercise and nutritional science.
ENS 602. Research Evaluation in Exercise and Nutritional Sciences (3)
Prerequisite: Exercise and Nutritional Sciences 601. Techniques in designing, conducting, and reporting research in exercise and nutritional science. Qualitative and quantitative paradigms examined. Ethical consideration of human research.
ENS 603. Measurement and Evaluation in Exercise and Rehabilitation (3)
Prerequisites: Exercise and Nutritional Sciences 305 and Statistics 119.
Measurement theory and practice as applied to exercise and rehabilitation. Interpretation of measures used in physical medicine and rehabilitation contexts.

ENS 610. Biomechanics: Measurement Techniques I—Kinematics (3)
Prerequisites: Exercise and Nutritional Sciences 306 and 603.
Kinematic analysis of human movement using videography, electrogoniometry, and accelerometry with automated data reduction techniques typically used in study of pathomechanics.

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.

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.

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.

ENS 671. Seminar in Advanced Sport and Exercise Psychology (3)
Prerequisite: Exercise and Nutritional Sciences 461.
Research and theory of psychological behavior in sport and physical activity. Theoretical models, research issues, and applications.

ENS 684. Behavior Change in Sport and Exercise (3)
Prerequisite: Exercise and Nutritional Sciences 307.
Principles and applications of operant psychology to the development and maintenance of behavior in physical education and sport environments. Behavioral techniques to manage and motivate learners in diverse physical activity settings.

ENS 687. Exercise Psychology: From Theory to Practice (3)
Prerequisites: Graduate standing in kinesiology or related field. Exercise and Nutritional Sciences 461 and credit or concurrent registration in Exercise and Nutritional Sciences 601.
Psychological concepts, principles and theories for understanding determinants and consequences of exercise and physical activity. Emphasis on application concepts in exercise settings. Evaluation of interventions to increase physical activity in different settings.

ENS 689. Applied Psychology for Superior Performance (3)
Prerequisite: Exercise and Nutritional Sciences 671.
Psychological factors for preparing superior athletes to compete, with particular emphasis on the day of competition.

ENS 696. Advanced Topics in Exercise and Nutritional Sciences (3)
Intensive study in specific areas of exercise and nutritional sciences. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

ENS 790. Seminar in Directed Readings (3) Cr/NC
Prerequisites: Credit or concurrent registration in 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)
Thomas P. Passananti, Ph.D., Associate Professor of History and Associate Director of the Center for Latin American Studies (Graduate Adviser)
Catalina Amuedo-Dorantes, Ph.D., Professor of Economics
Claudia V. Angelelli, Ph.D., Professor of Spanish
Aida Blanco, Ph.D., Professor of Spanish
David V. Carruthers, Ph.D., Professor of Political Science (Undergraduate Adviser)
James B. Gerber, Ph.D., Professor of Economics (Graduate Coordinator)
Juan M. Godoy, Ph.D., Professor of Spanish
Lawrence A. Herzog, Ph.D., Professor of Public Affairs
José Mario Martín-Flores, Ph.D., Professor of Spanish
William A. Nericcio, Ph.D., Professor of English and Comparative Literature
Norma Ojeda, Ph.D., Professor of Sociology and Chicana and Chicano Studies
Elisa J. Sobó, Ph.D., Professor of Anthropology
Gregory A. Talavera, M.D., Professor of Public Health
Fernando Bosco, Ph.D., Associate Professor of Geography
Stephen A. Colston, Ph.D., Associate Professor of History
Adelaída R. Del Castillo, Ph.D., Associate Professor of Chicana and Chicano Studies
Paula S. De Vos, Ph.D., Associate Professor of History
Jill Esbenshade, Ph.D., Associate Professor of Sociology
Liana Ewald, Ph.D., Associate Professor of Spanish
Kathleen A. Farley, Ph.D., Associate Professor of Geography
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
Kris-Hill Maher, Ph.D., Associate Professor of Political Science
Enrico A. Marcelli, Ph.D., Associate Professor of Sociology
Doreen J. Mattingly, Ph.D., Associate Professor of Women's Studies
Arion T. Mayes, Ph.D., Associate Professor of Anthropology
Jeffrey S. McIlwain, Ph.D., Associate Professor of Public Affairs
Frederick J. Conway, Ph.D., Assistant Professor of Anthropology
Victoria González-Rivera, Ph.D., Assistant Professor of Chicana and Chicano Studies
Katherine Elizabeth Swanson, Ph.D., Assistant Professor of Geography

Admission to Graduate Study

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

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

Graduate Admissions

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

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

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

Master of Arts Degree in Latin American Studies

The following materials should be mailed or delivered to:
Center for Latin American Studies (Graduate Coordinator)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4446
(1) Personal statement;
(2) Three letters of reference.

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

The following materials should be submitted by November 1 (October 1 for international students) for admission for the spring semester and May 1 for the fall semester to:
Center for Latin American Studies (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 Public Administration Degree and Master of Arts Degree in Latin American Studies

The following materials should be mailed or delivered to:
Center for Latin American Studies (Graduate Coordinator)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-6038
(1) Personal statement;
(2) Three letters of reference from individuals who have known the student's academic performance (one letter may be from an individual who knows the employment performance of the student).

Master of Public Health Degree and Master of Arts Degree in Latin American Studies

Applicants seeking admission to the Master of Public Health and Master of Arts degree in Latin American Studies should contact the Graduate School of Public Health requesting appropriate descriptive materials. Detailed application instructions can be obtained from our Web site at http://publichealth.sdsu.edu.

Students who do not fully meet the requirements for admission with classified graduate standing may be considered for conditionally classified graduate standing upon recommendation of the admissions committee and the graduate adviser.
Master of Arts Degree in Latin American Studies

General Information
Since 1976 the Center for Latin American Studies has been designated a National Resource Center for Latin American Studies (one of only eleven in the nation) by the United States Department of Education and funded through a Title VI grant. The Master of Arts degree administered by the center is an interdisciplinary program drawing on the expertise of an outstanding Latin Americanist faculty from the following departments: Anthropology, Art, Comparative Literature, Economics, Geography, History, Political Science, Public Affairs, Sociology, Spanish and Portuguese Languages and Literatures, Women’s Studies, and the College of Business Administration. Emphasis in the program is placed on the central issue of “Modernization and Urbanization” in Latin America and offered through nine courses from nine different departments.

Research interests and areas of expertise of the faculty include: demography, economic development, folklore, Indians and peasants, land tenure systems, the Latin American press, mental health and aging in Mexico, militarism and guerrilla warfare, Spanish American prose, poetry and criticism, theatre, U.S.-Latin American relations, and the U.S.-Mexico border.

Admission to the Degree Curriculum

In addition to meeting the requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin, the student must present the Bachelor of Arts degree with not less than 18 units of courses of Latin American content in three areas. A student whose preparation is deemed insufficient by his graduate adviser or by the Latin American Studies committee will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy described in Part Four of this bulletin. Moreover, students must demonstrate an oral and reading proficiency in Spanish through either the satisfactory completion of an oral and a written examination, or: (1) satisfactory completion of Spanish 201 and 202, and a reading examination administered by the Department of Spanish and Portuguese Languages and Literatures, or (2) satisfactory completion of three units of 500-level or graduate coursework in Spanish. In addition, students must complete satisfactorily (with a grade of B or better) in the following languages: Portuguese 101 or one semester of an indigenous Latin American language (such as Mixtec, Zapotec, or Náhuatl); coursework at or above the 500-level may be included as a part of the official program with the approval of the graduate coordinator.

Specific Requirements for the Master of Arts Degree

(Major Code: 03081) (SIMS Code: 114301)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the Master of Arts degree, as described in Part Four of this bulletin, the student must complete at least 30 units of upper division and graduate coursework including Latin American Studies 600 and 601, with not less than 24 units in courses of Latin American content selected from those listed below and distributed as follows:

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<thead>
<tr>
<th>Courses</th>
<th>600- and 700-numbered Courses</th>
<th>500-600- and 700-numbered Courses</th>
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<tbody>
<tr>
<td>Department A</td>
<td>6 units</td>
<td>6 units</td>
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<tr>
<td>Department B</td>
<td>3 units</td>
<td>3 units</td>
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<tr>
<td>Department C</td>
<td>3 units</td>
<td>3 units</td>
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<tr>
<td></td>
<td>12 units</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 and present their thesis research as an oral examination with all committee members present. Successful presentation of thesis research is a requirement for the degree. Students electing Plan B must pass a comprehensive written and oral examination in lieu of the thesis.

All programs will be approved by the Latin American Studies committee.

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

General Information

The College of Business Administration and the Center for Latin American Studies offer a three-year concurrent graduate program leading to a Master of Business Administration and a Master of Arts in Latin American Studies. The primary objective of the concurrent program is to offer preparation in the fields of business administration and Latin American studies for the purpose of providing the knowledge and skills necessary to promote and engage in business relationships within a Latin American historical, cultural, and linguistic milieu. In Latin America or in the United States.

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

Admission to the Degree Curriculum

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

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin. In addition:

1) the student will be required to complete Spanish 302 (or its equivalent), or Portuguese 401 (or its equivalent), and pass an oral and written examination administered by the Department of Spanish and Portuguese Languages and Literatures; 2) all core courses in business and Latin American studies must be completed prior to advancement with a minimum grade point average of 3.0 and no grade less than a B– in any core course; 3) have been recommended for advancement by the combined advisory committee; 4) have a thesis proposal approved by the combined faculty advisory committee.

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

Specific Requirements for the MBA/MA Degree

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

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

1. The college expects students entering the Master of Business Administration/MA in Latin American Studies program to be proficient in several areas. These include proficiency in 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.

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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 Regulation and Corporate Governance in Accounting (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**
     - LATAM 696 Seminar in Corporate Governance (3)
   - 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:
   - 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 580 Special Topics* (3)
     - LATAM 696 Experimental Topics* (3)
     - LATAM 795 Latin American Studies Internship (3) Cr/NC
     - LATAM 797 Research (3) Cr/NC/RP

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

   - **Economics**
     - ECON 565 North American Economic Relations (3)

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

   - **Political Science**
     - POL S 564 Political Ecology of Latin America (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 Sociology of the United States-Mexico Transborder Populations and Globalization (3)

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

   - Acceptable when of relevant content; check with the Latin American Studies graduate adviser before enrolling. Students must apply under the provisions of the affiliation agreement with the California Western School of Law.

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

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

**Master of Public 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.

**Adancement 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):
   - 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)

3. Complete three courses in one theme listed below (9 units):
   - City Planning Theme
     - 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)
   - Criminal Justice Administration Theme
     - CJ 601 Seminar in the Administration of Criminal Justice (3)
     - CJ 602 Seminar in Comparative Criminal Justice System (3)
     - CJ 603 Seminar in Community and Restorative Justice (3)
     - CJ 604 Seminar in Criminal Justice and Urban Administration (3)
     - CJ 605 Seminar in Juvenile Justice and Youth Violence (3)
   - Public Personnel and Labor Relations Theme
     - PA 530 Negotiation and Bargaining in the Public Service (3)
     - PA 531 Governmental Employer-Employee Relations (3)
     - PA 632 Seminar of Organization Development in the Public Sector (3)
     - PA 643 Seminar in Administrative Behavior (3) (Offered only at IVC)
   - General Public Administration Theme
     - PA 620 Seminar in Management of Urban Governments (3)
     - PA 632 Seminar of Organization Development in the Public Sector (3)
     - PA 640 Seminar in Public Administration (3)

4. Complete five courses from at least two departments (15 units):
   - Latin American Studies
     - LATAM 540 History, Society, and Ecology of Baja Peninsula (3)
     - LATAM 550 Mexican-US Border from a Latin American Perspective (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 582 Regional Anthropology* (3)
     - ANTH 583 Topical Anthropology* (3)
   - Economics
     - ECON 565 North American Economic Relations (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 Political Ecology of Latin America (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 Sociology of the United States-Mexico Transborder Populations and Globalization (3)

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

5. Students must complete PA 799A or LATAM 799A or PA 797 or LATAM 797 (3 units). The thesis (PA 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 (PA 797 or LATAM 797) must incorporate field research or an internship, and must result in a project that is approved by the graduate advisers in both programs.

6. An internship of 12 units (one semester) beyond the coursework is required of students who have not had equivalent experience. Students should consult with the public administration graduate adviser before enrolling.

7. Students must pass the American Council of Teachers of Foreign Language (ACTFL) oral proficiency examination in either Spanish or Portuguese with a score of 2.0 or above.
Master of Public Health Degree and Master of Arts Degree in Latin American Studies

General Information

The Graduate School of Public Health (GSPH) and the Center for Latin American Studies offer a concurrent graduate program leading to a Master of Public Health (MPH) in Epidemiology, Environmental Health, or Health Promotion and Behavioral Science and a Master of Arts (MA) in Latin American Studies. This concurrent program offers preparation in the fields of public health and Latin American studies for the purpose of promoting health, preventing disease, and enhancing the delivery of social and health services in Latino communities.

Admission to the Degree Curriculum

To request information about the concurrent graduate program in Public Health and Latin American Studies, applicants should contact either the Graduate School of Public Health Director of the MPH/MA program, or the Latin American Studies Director of the M.A. program, San Diego State University. Students must meet the general requirements to graduate study at the university as detailed in Part Two of this bulletin. Application materials are also available from the GSPH Web site at http://publichealth.sdsu.edu or the Center for Latin American Studies Web site at http://latinamericanstudies.sdsu.edu.

Advancement to Candidacy

All students must: (1) meet the general requirements for advancement to candidacy as described in Part Four of this bulletin; (2) pass an evaluation of progress towards the concurrent degree by both GSPH and Latin American Studies advisers; (3) complete all core courses in Public Health and Latin American Studies; (4) have earned at least 24 units of graduate study within the concurrent program with a minimum grade point average of 3.0 and no grade less than a B- in each core course; (5) have been recommended for advancement by the combined faculty advisory committee; (6) have an approved concurrent program of study; and (7) have a thesis proposal approved by the combined faculty advisory committee, which must include at least one faculty member from Latin American Studies and one faculty member from Public Health.

Upon advancement to candidacy, the student will enroll in Public Health or Latin American Studies 797 (Research) and Public Health or Latin American Studies 799A (Thesis). All students in the concurrent degree program are required to complete a thesis. This thesis will incorporate theory, method, and analytic techniques from both Public Health and Latin American Studies. The thesis topic and chair will be determined by the student and the faculty advisory committee. All students must pass the American Council of Teachers of Foreign Language (ACTFL) oral proficiency examination in either Spanish or Portuguese with a score of 2.0 or above.
**Specific Requirements for the MPH/MA Degree**

(Major Code: 12141/03081) (SIMS Code: 997310)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete an officially approved course of study of not less than 63 units as listed below.

### General Requirements

**Total General Units = 39**

<table>
<thead>
<tr>
<th>Core Courses (18 units)</th>
<th>Prescribed Electives (15 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 580 (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 696 (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 700 (3) SOC 730 (3)</td>
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</tr>
<tr>
<td>P H 605 (3)</td>
<td>ANTH 583 (3) LATAM 798 (3) WMNST 512 (3)</td>
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</tr>
<tr>
<td>LATAM 600 (3)</td>
<td>ANTH 603 (3) POL S 555 (3) WMNST 565 (3)</td>
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<tr>
<td>LATAM 601 (3)</td>
<td>HIST 551 (3) POL S 568 (3) WMNST 580 (3)</td>
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<td></td>
<td>HIST 640 (3) POL S 655 (3) WMNST 605 (3)</td>
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<tr>
<td></td>
<td>POL S 661 (3)</td>
<td></td>
</tr>
</tbody>
</table>

### Public Health Concentration Requirements

**Total Units = 24**

(Students must complete one of the following concentrations)

#### Epidemiology Concentration

(SIMS Code: 997311)

**Total Epidemiology Units = 24**

<table>
<thead>
<tr>
<th>Required Courses (15 units)</th>
<th>Prescribed Electives (6 units)</th>
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<td>P H 603 (3)</td>
<td>P H 625 (3) P H 722 (3)</td>
</tr>
<tr>
<td>P H 621 (3)</td>
<td>P H 626 (3) P H 724 (3)</td>
</tr>
<tr>
<td>P H 622 (3)</td>
<td>P H 628 (3) P H 726 (3)</td>
</tr>
<tr>
<td>P H 623 (3)</td>
<td>P H 649 (3) P H 823 (3)</td>
</tr>
<tr>
<td>P H 627 (3)</td>
<td>P H 700A (3) P H 824 (3)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Electives (3 units)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 585, NUTR 600, 607, 700, STAT 510, 550, 551A, 560, 672, 677, or three units of electives to be selected with approval of the faculty advisory committee.</td>
<td></td>
</tr>
</tbody>
</table>

#### Health Promotion and Behavioral Science Concentration

(SIMS Code: 997312)

**Total Health Promotion and Behavioral Science Units = 24**

<table>
<thead>
<tr>
<th>Required Courses (15 units)</th>
<th>Prescribed Electives (6 units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P H 607 (3)</td>
<td>P H 664 (3)</td>
</tr>
<tr>
<td>P H 661 (3)</td>
<td>P H 667 (3)</td>
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<td>P H 662 (3)</td>
<td>P H 700F (3)</td>
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<td>P H 663 (3)</td>
<td>P H 762 (3)</td>
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</table>

<table>
<thead>
<tr>
<th>Electives (3 units)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Three units to be selected with the approval of the faculty advisory committee.</td>
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</tbody>
</table>

#### Environmental Health Concentration

(SIMS Code: 997313)

**Total Environmental Health Units = 24**

<table>
<thead>
<tr>
<th>Required Courses (18 units)</th>
<th>Prescribed Electives (at least 6 units)</th>
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</thead>
<tbody>
<tr>
<td>P H 603 (3)</td>
<td>P H 630 (3)</td>
</tr>
<tr>
<td>P H 632 (3)</td>
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<tr>
<td>P H 636 (3)</td>
<td>P H 638A (3)</td>
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<tr>
<td>P H 639 (3)</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electives (3 units)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Three units to be selected with the approval of the faculty advisory committee.</td>
<td></td>
</tr>
</tbody>
</table>
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 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. Castle 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 545. The Latin American City (3)**

Prerequisite: Upper division or graduate standing in Latin American studies, anthropology, Chicana and Chicano studies, history, political science, or sociology.

History and theory of urbanization in Latin America to include urban landscapes, rural to urban migrations, re-creation of community within urban centers, modified identities, globalized labor, segregation, and community borders.


Prerequisites: Six upper division units with Latin American content. Spanish proficiency.

Multidisciplinary analysis of Mexican-US border region.

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

**Communication Course (COMM)**

COMM 596. Selected Topics (1-4)*

**Comparative Literature Courses (C LT)**

C LT 594. Topics in Literature and the Arts (3)
C LT 596. Topics in Comparative Literature (3)*

**Economics Courses (ECON)**

ECON 561. International Trade (3)
ECON 565. North American Economic Relations (3)
ECON 592. International Monetary Theory and Policy (3)
ECON 596. Experimental Topics (3)*

**Geography Courses (GEOG)**

GEOG 507. Geography of Natural Vegetation (3)
GEOG 509. Regional Climatology (3)
GEOG 554. World Cities: Comparative Approaches to Urbanization (3)
GEOG 596. Advanced Topics in Geography (1-3)*

**History Courses (HIST)**

HIST 550. Colonial Mexico (3)
HIST 551. Modern Mexico (3)
HIST 558. Latin America in World Affairs (3)
HIST 596. Selected Studies in History (1-4)*

**Journalism and Media Studies Course (JMS)**

JMS 591. Global 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. Political Ecology of Latin America (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 596. Current Topics in Sociology (1-3)*

**Spanish Courses (SPAN)**

SPAN 502. Genre Studies in Spanish American Literature (3)
SPAN 515. Mexican Literature (3)
SPAN 520. Caribbean Area Countries Literature (3)
SPAN 549. Spanish Phonetics and Phonology (3)
SPAN 581. Mexican Sociolinguistics (3)
SPAN 596. Selected Studies in Spanish (3)*

**Women's Studies Courses (WMNST)**

WMNST 512. Latinas in the Americas (3)
WMNST 515. Women: Myth, Ritual, and the Sacred (3)
WMNST 553. Women and the Creative Arts (3)*
WMNST 565. Women: Health, Healing, and Medicine (3)
WMNST 580. Women, Development, and the Global Economy (3)
WMNST 596. Topics in Women's Studies (3)*

*Acceptable when of relevant content.

**GRADUATE COURSES**

**LATAM 600. Seminar in Latin American Studies (3)**

Prerequisite: Graduate standing.

Core seminar in Latin American studies. Historical, conceptual, and methodological survey of Latin American studies from first European conquests in western hemisphere to end of twentieth century.

**LATAM 601. Seminar on Methodology of Latin American Studies (3)**

Prerequisite: Graduate standing.

Theories and methodologies of Latin American Studies.
Latin American Studies

LATAM 696. Experimental Topics (3)
Prerequisite: Graduate standing.
Intensive study in specific areas of Latin American studies. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

LATAM 700. Current Issues in Latin American Politics (3)
Prerequisites: Graduate standing, Latin American Studies 601, and six upper division units in either history or political science.
Directed research on topics selected from a designated area of Latin American politics and history. May be repeated with new content. Maximum credit six units applicable to a master’s degree.

LATAM 795. Latin American Studies Internship (3) Cr/NC
Prerequisites: Latin American Studies 601 and consent of instructor. A 160-hour internship approved by instructor in public and private agency.

LATAM 797. Research (1-3) Cr/NC/RP
Prerequisite: Consent of graduate adviser.
Research in one of the fields of Latin American studies. Maximum credit six units applicable to a master’s degree.

LATAM 798. Special Study (1-3) Cr/NC/RP
Prerequisites: Consent of staff, to be arranged with the director and instructor.
Individual study. Maximum credit six units applicable to a master’s degree.

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

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

Anthropology Courses (ANTH)

ANTH 600. Seminar (3)*
ANTH 602. Seminar in Archaeology (3)
ANTH 603. Seminar in Ethnology (3)
ANTH 621. Seminar in Topical Anthropology (3)
ANTH 797. Research (3) Cr/NC/RP
ANTH 798. Special Study (1-3) Cr/NC/RP

Art Courses (ART)

ART 760. Seminar in Twentieth Century Art (3)
ART 798. Special Study (1-3) Cr/NC/RP

City Planning Course (C P)

C P 670. History of Urban Planning (3)

Communication Course (COMM)

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

Economics Courses (ECON)

ECON 696. Experimental Topics (3)*
ECON 700. Seminar in Microeconomic Applications (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 796. 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)*
POLS 795. Problem Analysis (3)*
POLS 797. Research in Political Science (3) Cr/NC/RP
POLS 798. Special Study (1-3) Cr/NC/RP

Public Administration Course (P A)

P A 798. Special Study (1-3) Cr/NC/RP

Sociology Courses (SOC)

SOC 696. Experimental Topics (3)*
SOC 730. Seminar in Social Institutions (3)
SOC 798. Special Study (1-3) Cr/NC/RP

Spanish Courses (SPAN)

SPAN 601. Seminar in Hispanic Literary Theory (3)
SPAN 606. 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 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.
General Information

The College of Arts and Letters offers a flexible multidisciplinary master’s degree in the liberal arts and sciences. An alternative approach to traditional graduate education, the program consists of coursework that crosses disciplinary boundaries so as to better appreciate the richness of existence and begin to apply multiple perspectives to the complex realities that face us. From explorations of the human condition to the social impacts of technology, the program focuses on issues central to the meaning and quality of our lives and the creation of sustainable, just, communities.

In existence since 1987, the Master of Arts in Liberal Arts and Sciences is equally well suited to students who recently achieved the bachelor’s degree, students preparing for the Ph.D., professionals for whom the master’s degree may mean promotion or career advancement, and life-long learners in search of personal enrichment and intellectual community. We welcome applications from K-12 teachers, community activists, and policy makers.

MALAS draws upon SDSU faculty who are trained in disciplines but whose teaching and scholarship makes connections across disciplines. Interplays among the humanities, the social sciences, the natural sciences, and the arts are taken up in four required courses. These seminars seek to understand contemporary life and construct positive futures but they also push the level of discourse to foundational questions of epistemology and perennial philosophy, such as the existence of truth, goodness, and beauty. Particular attention is given to understanding the psychological, economic, and environmental consequences of globalization, and to the ways that human values are embodied in and transformed by modes of consumption, labor, and material culture. The four core courses act to ground and center five elective courses, selected by each student to customize a program that captures his or her interests.

Admission to Graduate Study

In addition to satisfying the requirements for admission to the university with classified graduate standing as described in Part Two of this bulletin, the student seeking admission must: (1) have a grade point average of 3.0 or better on work completed during the last 60 units for the baccalaureate degree, (2) have an acceptable score on the GRE General Test (combined verbal and quantitative), (3) complete a statement of purpose essay, and (4) submit two letters of recommendation.

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

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to Master of Arts in Liberal Arts and Sciences.

Graduate Admissions

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

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

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

Note:

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

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

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.
(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 com-
prehensive examination in lieu of the thesis.

All programs must be approved by the MALAS director in consulta-
tion 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 Gradu-
ate 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 pro-
gram 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 Linguistics and Asian/Middle Eastern Languages
In the College of Arts and Letters

OFFICE: Education and Business Administration 334
TELEPHONE: 619-594-5288 / FAX: 619-594-4877
http://www.rohan.sdsu.edu/dept/linguist/index.html

Faculty
Ghada Osman, Ph.D., 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
Deborah Poole, 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
Gregory D. Keating, Ph.D., Associate Professor of Linguistics
Ryu Kitajima, Ph.D., Associate Professor of Japanese
Robert P. Malouf, Ph.D., Associate Professor of Linguistics
Betty T. R. Samraj – Discourse analysis, writing in the disciplines, ESL methods and materials.
Ruey-Juian Regina Wu, Ph.D., Associate Professor of Linguistics and Asian/Middle Eastern Languages
Zheng-sheng Zhang, Ph.D., Associate Professor of Chinese

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.
- **Betty T. R. Samraj** – Discourse analysis, writing in the disciplines, ESL methods and materials.
- **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.
Students selecting the TESOL/Applied (ESL/Applied) specialization must complete Linguistics 652, and at least six units from the following: Linguistics 623, 650, 653, and 655. An internship, Linguistics 740, is required of all students selecting this specialization who have not taught ESL previously.

Students selecting the Computational Linguistics specialization must complete Linguistics 581 or Computer Science 581, and six units selected from Linguistics 620, 654, 696 (when offered with computational linguistics content). The graduate electives should be approved by the graduate adviser. A prerequisite to the Computational Linguistics specialization is completion of Linguistics 570 or equivalent.

Students selecting one specialization may enroll in courses from the other specialization as electives.

With the approval of the graduate adviser, a maximum of six units selected from the following courses will be accepted for graduate credit in linguistics: Anthropology 604; Computer Science 550, 560, 562, 596 (when offered with computational linguistics content), 620, 696 (when offered with computational linguistics content), Rhetoric and Writing Studies 602; Spanish 561, 770; Speech, Language, and Hearing Sciences 790, 793.

In addition, with approval of the graduate adviser, a student must choose either a thesis (Plan A), or a written comprehensive examination (Plan B). Plan A students must select a committee of three faculty, two of whom are from the department, to supervise the thesis. In consultation with the graduate adviser, students select one of two options at the time of filing an official program of study.

Advanced Certificate in Teaching English as a Second or Foreign Language (TESL/TEFL)

(Certificate Code: 90035) (SIMS Code: 114786)

The Department of Linguistics and Asian/Middle Eastern Languages offers a Basic and an Advanced Certificate in Teaching English as a Second or Foreign Language (TESL/TEFL). The Advanced Certificate requires Linguistics 652; two courses from Linguistics 650, 653, 655, and 795 (when offered with applied linguistics content); and one course from Linguistics 530, 622, 623, 654, and 795. Students must obtain a 3.0 GPA overall in the courses for the advanced certificate. The prerequisite to the Advanced Certificate is the Basic Certificate or its equivalent. A student’s entire program comprising Basic and Advanced Certificates must include at least one course from Linguistics 530, 622, and 623. Under certain circumstances comparable courses taken at other institutions may count toward the certificate. Such courses must be evaluated and approved by the certificate advisor. For information on the Basic Certificate, please see the General Catalog.

Courses Acceptable on Master’s Degree Programs in Linguistics (LING)

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

UPPER DIVISION COURSES

LING 501. Fundamentals of Linguistics (3)
Prerequisite: Upper division standing.
Principles of modern linguistics, with attention to English phonetics, phonology: morphology, syntax, semantics and pragmatics; universals and typology. (Formerly numbered Linguistics 520.)

LING 502. Language in Mind and Society (3)
Prerequisite: Linguistics 501. Proof of completion of prerequisite required: Copy of transcript.
Child language acquisition, adult language production/comprehension and sociolinguistics. Dialects, language variation, and standardization. Bilingualism and language change.
LING 503. Functions of Language (3)
Prerequisite: Linguistics 501. Proof of completion of prerequisite required: Copy of transcript.

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 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 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 553. Bilingualism (3)
Prerequisite: Linguistics 420 or 501 or Speech, Language, and Hearing Sciences 300.
Bilingual societies, language choice by bilinguals, bilingual language acquisition, effects of bilingualism on language structure and use.

LING 554. Child Language Acquisition (3)
Prerequisite: Linguistics 420 or 501.
Theories and research methods in child language acquisition; quantitative and qualitative analyses of data at various levels of grammar (phonology, morphology, lexicon, syntax, and discourse) using language and acquisition corpora.

LING 555. Practical Issues in Teaching English as a Second Language (3)
Prerequisite: Credit or concurrent registration in Linguistics 550. Practical approaches to applications of the theory of English as a Second Language (ESL) and methodology for speaking, reading, listening, writing; techniques for facilitating growth of communicative competence.

LING 556. Computer Assisted Language Learning and Teaching (3)
Prerequisite: Credit or concurrent registration in Linguistics 550. Theory and practice of computer assisted language learning and language teaching. Hands-on experience with pedagogical aspects of using technology in the language classroom.

LING 570. Mathematical Linguistics (3)
Prerequisite: Two linguistics courses.
Mathematical tools for linguistics: set theory; basic algebraic structures such as groups, lattices, and Boolean algebras; formal language theory; propositional and 1st-order logic. Some emphasis on proofs. Applications to linguistics.

LING 571. Computational Corpus Linguistics (3)
Prerequisite: Two linguistics courses.
Practical introduction to computation with text corpora and introduction to Python. Tokenizing, part-of-speech tagging, and lemmatizing (stemming) large corpora. Writing of Python programs required.

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

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 596, 696, 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-orientated 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 651. Sociology of Language (3)
Prerequisite: Linguistics 551.
Public and private reasons for planned language behavior. Creoles, personal speech interaction patterns, bilingualism, cultural diversity in language use, social-theoretical background, language planning, and social uses of sexism in language.

LING 652. Second Language Acquisition (3)
Prerequisites: Linguistics 501.
Analyses of theories of second language acquisition; theoretical and empirical bases of current second language teaching methodologies.

LING 653. ESL Reading and Writing (3)
Prerequisite: Linguistics 550.
Application of discourse and reading theory to the teaching and testing of ESL reading and writing. Issues of coherence, process-product, genre studies.

LING 654. Language and Cognition (3)
Prerequisite: Linguistics 552.
Language production, comprehension, and acquisition, as these relate to human cognition.

LING 655. English for Specific Purposes and Content-Based Instruction (3)
Prerequisites: Linguistics 420, 501, and 550.
Theory, practice, and history of these two related approaches to ESL/EFL.

LING 656. Quantitative Research Methods in Language Studies (3)
Prerequisite: Linguistics 420 or 501.
Research design and quantitative research methods for linguistic applications. Critical evaluation of published research studies; empirical research project.

LING 657. Foundations of Language Assessment (3)
Prerequisites: Linguistics 350, 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 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
Chair of Department: Richard A. Levine, Ph.D.

Faculty

Mathematics and Applications
Peter Blomgren, Ph.D., Professor of Mathematics
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)
T.inc Geveci, Ph.D., Professor of Mathematics
Stefen Hui, Ph.D., Professor of Mathematics
(M.S. Communications Systems Graduate Adviser)
F. David Lesley, Ph.D., Professor of Mathematics, Emeritus
Joseph M. Mahaffy, Ph.D., Professor of Mathematics
Michael O’Sullivan, Ph.D., Professor of Mathematics
Antonio Palacios, Ph.D., Professor of Mathematics
Peter Salamon, Ph.D., Professor of Mathematics
(M.A.T.S. Graduate Adviser)
Samuel S. Shen, Ph.D., Professor of Mathematics
J. Carmelo Interlando, Ph.D., Associate Professor of Mathematics
Stephen J. Kirschvink, Ph.D., Associate Professor of Mathematics
Vadim Ponomarenko, Ph.D., Associate Professor of Mathematics
(M.A. Mathematics Graduate Adviser)

Mathematics Education
Joanne Lobato, Ph.D., Professor of Mathematics
B. Ricardo Nemirovsky, Ph.D., Professor of Mathematics
Chris L. Rasmussen, Ph.D., Professor of Mathematics
Janet S. Bowers, Ph.D., Associate Professor of Mathematics
(M.A.T.S. Graduate Adviser)
Susan D. Nickerson, Ph.D., Associate Professor of Mathematics

Associateships
Graduate teaching associateships in mathematics are available to a limited number of qualified students. Application blanks and additional information may be secured from the chair of the department.

General Information

The Department of Mathematics and Statistics offers graduate study leading to the Master of Arts degree in mathematics, the Master of Arts degree for teaching service with a concentration in mathematics, the Master of Science degree in 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.cs.mentor.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 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 623, 627A, 627B, and at least two courses in analysis chosen from courses Mathematics 630A, 630B, 631A, 631B.

2. Among the 30 units of coursework, students must include at least two courses in the area of algebra chosen from courses Mathematics 623, 627A, 627B, and at least two courses in analysis chosen from courses Mathematics 630A, 630B, 631A, 631B.

3. Before entering the program, students should have completed the following courses or their equivalents: Mathematics 521B, 524, 532, 534B. If a student has not had these courses before entering the program, they must be taken during the first year. (A maximum of two of these courses may be applicable toward the degree course requirements.)

4. With departmental approval, students may select Plan A and complete Mathematics 798A or Plan B requiring a written comprehensive examination based on materials to be selected by the department from among Mathematics 623, 627A, 627B, 630A, 630B, 631A, 631B.
Plan A is encouraged for most students since it provides an introduction to independent reading and is a natural pathway to independent research.

Specific Requirements for the Master of Science Degree in Applied Mathematics

(Major Code: 17031) (SIMS Code: 776314)

In addition to meeting the requirements for classified graduate standing, and the basic requirements for the master's degree described in Part Four of this bulletin, the student must meet the following requirements:

1. Have completed before entering the program, the following courses or their equivalents: Mathematics 524, 534A, 534B, 537, 541; Statistics 551A. At most one of these courses can be counted towards the degree course requirements. Programming proficiency in a computer language is also a prerequisite. Admission to the program as conditionally classified may be granted without some of the coursework above, contingent on the student removing any deficiencies by the end of the first year in the program.

2. Complete a minimum of 30 units of approved 500-, 600-, and 700-numbered courses. All programs must include at least 21 units in mathematical science (with the possible exception of a student whose main interest is mathematical modeling) and at least 18 units selected from 600- and 700-numbered courses. No more than six units in Mathematics 797 and 798 will be accepted for credit toward the degree. A program of study must be approved by the graduate adviser.

3. The student must select Plan A and complete Mathematics 799A. Thesis. The student must also have an oral defense of their thesis or research, open to the public.

Concentration in Dynamical Systems

(Major Code: 17031) (SIMS Code: 776316)

This concentration focuses on interdisciplinary applications of dynamical systems and nonlinear modeling in biology, chemistry, engineering, and physics. Students with interests in modeling and analyzing real life problems through mathematics will benefit from this concentration. To enter the program, students must possess a bachelor's degree with a strong mathematical background. In addition to completing the specific requirements for the Master of Science degree in applied mathematics, students pursuing this concentration will complete the following 15 units of core courses: Mathematics 531, 537, 538, 638, and 639; 12 units of electives and three units of Mathematics 799A (Thesis/Project). Possible electives include Mathematics 639, 696, Special Topics in Dynamical Systems (Applied Bifurcation of Dynamical Systems, Nonlinear Time Series, Numerical Experiments and Methods in Dynamical Systems, Fractal Geometry, Mathematical Biology/Neural Modeling) to be offered depending on demand and resources. Other recommended electives include Mathematics 542, 623, 668, 692A, 692B, 697; Computer Science 553; Physics 580. Depending on the student's interests and background, electives from other departments may be approved by the adviser. For additional information, visit http://minds.sdsu.edu/masters/

Concentration in Mathematical Theory of Communication Systems

(Major Code: 17031) (SIMS Code: 776317)

This concentration focuses on the area of mathematics relevant to the transmitting and processing of information by digital or analog methods. In addition to meeting the requirements for classified standing in the Master of Science program in applied mathematics, students pursuing this concentration should also have completed Mathematics 521A or its equivalent before entering the program. Students must complete Mathematics 525, 626, 668; one course selected from Mathematics 625 or 667, and three courses selected from Mathematics 623, 627A, 627B, 630A-630B, 631A-631B. Two additional courses in mathematics or in a related area may be selected with the approval of the program adviser. Either Mathematics 797 (Research) or 799A (Thesis) are required of students in this degree program.

Communications Systems Certificate

The Communication Systems Certificate provides mathematicians and engineers with the specialized training in the areas of coding, cryptography, and signal processing relevant for the understanding of modern communication systems. This certificate is designed for individuals who need the knowledge this certificate program provides to participate in projects in the area of communication systems and signal processing.

This is an advanced academic certificate at the post-baccalaureate level. The admission requirement is a bachelor's degree in mathematics, engineering, or a closely related field. Individuals with knowledge of the background materials through work or self-study may also be accepted into this program at the discretion of the program director.

Course requirements for the certificate program are the following courses completed with a grade point average of 3.0 or above: Mathematics 522, 525, 626, 667, and 668.

For information on the application process, contact the Department of Mathematics and Statistics or call 619-594-6191.

Courses Acceptable on Master's Degree

Programs in Applied Mathematics, Mathematics, and Statistics (MATH)

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

UPPER DIVISION COURSES

NOTE: Proof of completion of prerequisites required for all upper division courses: Copy of transcript.

MATH 509. Computers in Teaching Mathematics (3)

Two lectures and three hours of laboratory.

Prerequisite: Mathematics 252.

Solving mathematical tasks using an appropriate computer interface, and problem-based curricula. Intended for those interested in mathematics teaching.

MATH 510. Introduction to the Foundations of Geometry (3)

Prerequisite: Mathematics 122 or 151.

The foundations of Euclidean and hyperbolic geometries. Highly recommended for all prospective teachers of high school geometry.

MATH 521A. Abstract Algebra (3)

Prerequisites: Mathematics 245 and 254.

Abstract algebra, including elementary number theory, groups, and rings.

MATH 521B. Abstract Algebra (3)

Prerequisite: Mathematics 521A.

Continuation of Mathematics 521A. Rings, ideals, quotient rings, unique factorization, noncommutative rings, fields, quotient fields, and algebraic extensions.

MATH 522. Number Theory (3)

Prerequisite: Mathematics 245.

Theory of numbers to include congruences, Diophantine equations, and a study of prime numbers; cryptography.

MATH 523. Mathematical Logic (3)

Prerequisite: Mathematics 245.

Propositional logic and predicate calculus. Rules of proof and models. Completeness and the undecidability of arithmetic. Not open to students with credit in Philosophy 521.

MATH 524. Linear Algebra (3)

Prerequisites: Mathematics 245 and 254; or 342A.

Vector spaces, linear transformations, orthogonality, eigenvalues and eigenvectors, normal forms for complex matrices, positive definite matrices and congruence.

MATH 525. Algebraic Coding Theory (3)

Prerequisite: Mathematics 254.

Linear codes, perfect and related codes, cyclic linear codes, BCH codes, burst error-correcting codes.
MATH 531. Partial Differential Equations (3)  
Prerequisites: Mathematics 252 and 337. 

MATH 532. Functions of a Complex Variable (3)  
Prerequisite: Mathematics 252.  
Analytic functions, Cauchy-Riemann equations, theorem of Cauchy, Laurent series, calculus of residues, and applications.

MATH 533. Vector Calculus (3)  
Prerequisite: Mathematics 254 or 342A.  
Scalar and vector fields; gradient, divergence, curl, line and surface integrals: Green’s, Stokes’ and divergence theorems. Green’s identities. Applications to potential theory or fluid mechanics or electromagnetism.

MATH 534A. Advanced Calculus I (3)  
Prerequisites: Mathematics 245 and 254; or 342A.  
Completeness of the real numbers and its consequences, sequences of real numbers, continuity, differentiability and integrability of functions of one real variable.

MATH 534B. Advanced Calculus II (3)  
Prerequisite: Mathematics 534A.  
Series and sequences of functions and their applications, functions of several variables and their continuity, differentiability and integrability properties.

MATH 537. Ordinary Differential Equations (3)  
Prerequisite: Mathematics 337.  
Theory of ordinary differential equations: existence and uniqueness, dependence on initial conditions and parameters, linear systems, stability and asymptotic behavior, plane autonomous systems, series solutions at regular singular points.

MATH 538. Discrete Dynamical Systems and Chaos (3)  
Prerequisites: Minimum grade of C in Mathematics 151; Mathematics 254 or 342A, 342B.  
One- and two-dimensional iterated maps, equilibria and their stability, sensitive dependence on initial conditions, Lyapunov exponents, horseshoe maps, period doubling, chaotic attractors, Poincare maps, stable/unstable manifolds, bifurcations. Applications in biology, chemistry, physics, engineering, and other sciences.

MATH 541. Introduction to Numerical Analysis and Computing (3)  
Prerequisites: Mathematics 254 or 342A; and Mathematics 241 or 242 or Computer Science 106 or 107.  
Solution of equations of one variable, polynomial interpolation and approximation, numerical differentiation and quadrature, linear least squares approximation, the fast Fourier transformation.

MATH 542. Introduction to Computational Ordinary of Differential Equations (3)  
Prerequisites: Mathematics 337 and 541.  

MATH 543. Numerical Matrix Analysis (3)  
Prerequisite: Mathematics 541.  

MATH 562. Mathematical Methods of Operations Research (3)  
Prerequisites: Mathematics 252 and 254.  
Theory and applications concerned with optimization of linear and non-linear functions of several variables subject to constraints, including simplex algorithms, duality, applications to game theory, and descent algorithms.

MATH 579. Combinatorics (3)  
Prerequisite: Mathematics 245.  
Permutations, combinations, generating functions, recurrence relations, inclusion-exclusion counting. Polya’s theory of counting, other topics and applications.

MATH 596. Advanced Topics in Mathematics (1-4)  
Prerequisite: Consent of instructor.  
Selected topics in classical and modern mathematical sciences. May be repeated with the approval of the instructor. See Class Schedule for specific content. Limit of nine units of any combination of 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

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 636. Mathematical Modeling (3)  
Prerequisites: Mathematics 254 and 337 or Mathematics 342A and 342B or Aerospace Engineering 280.  
Advanced models from the physical, natural, and social sciences. Emphasis on classes of models and corresponding mathematical structures.
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 Methods: Computational Optimization (3)  
Prerequisites: Mathematics 524 and 541.  
Numerical optimization: Newton, Truncated-Newton, and Quasi-Newton methods for unconstrained optimization; with applications to nonlinear least squares, orthogonal distance regression, and nonlinear equations.

MATH 693B. Advanced Numerical Methods: Computational Partial Differential Equations (3)  
Prerequisites: Mathematics 531 and 541.  

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

MATH 720. Seminar (1-3)  
Prerequisite: Consent of instructor.  
An intensive study in advanced mathematics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

MATH 790. Practicum in Teaching of Mathematics (1) Cr/NC  
Prerequisite: Award of graduate teaching associateship in mathematics.  
Supervision in teaching mathematics. Lecture writing, style of lecture presentation and alternatives, test and syllabus construction, and grading system. Not applicable to an advanced degree. Required for first semester GTA’s.

MATH 797. Research (1-3) Cr/NC/RP  
Prerequisite: Six units of graduate level mathematics. Research in one of the fields of mathematics. Maximum credit six units applicable to a master’s degree.

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

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

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

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

For additional courses useful to mathematicians see the sections under:  
- Computer Science  
- Mathematics and Science Education  
- Statistics
Mathematics and Science Education
In the College of Sciences and
In the College of Education

For further information regarding programs, consult the following:
Ph.D. Program 6475 Alvarado Rd., #236
619-594-6191
e-mail: mathsciphd@sdsu.edu
M.A. Program 619-594-4696
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
Alexander W. Chizhik, 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
(Ph.D. Graduate Adviser)
Chris L. Rasmussen, Ph.D., Professor of Mathematics
Stephen K. Reed, Ph.D., Professor of Psychology
Janet S. Bowers, Ph.D., Associate Professor of Mathematics
(M.A.T.S. Graduate Adviser)
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
Rafaela M. Santa Cruz, Ph.D., Associate Professor of Teacher Education
Kathy S. Williams, Ph.D., Associate Professor of Biology
Meredith E. Houle, Ph.D., Assistant Professor of Teacher Education
Sara J. Unsworth, Ph.D., Assistant Professor of Psychology

Committee for Mathematics Education
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B. Ricardo Nemirovsky, Ph.D., Professor of Mathematics
Randolph A. Philipp, Ph.D., Professor of Teacher Education
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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. Bishop, Ph.D., Assistant Professor of Teacher Education

Section I.
Master’s Degree Programs

General Information
The Department of Mathematics and Statistics offers two specializations in its program of graduate study leading to a Master of Arts degree for teaching service. The specialization for community college teaching offers candidates a program designed to provide them with the mathematical breadth necessary to teach a wide variety of lower-division collegiate mathematics courses, while also providing them with a better understanding of the issues involved in teaching and learning mathematics. The specialization for secondary teaching offers coursework designed to strengthen the mathematical background of secondary teachers, to provide teachers with a deeper understanding of learning and teaching mathematics in grades 7-12, and to allow teachers the opportunity to analyze curriculum and evaluation efforts in a manner that can lead them to make reasoned judgments about curricular, testing, and instructional issues in grades 7-12 mathematics.

Courses described in this section may also be of interest to students seeking the Master of Arts degree in education with concentrations in elementary curriculum and instruction or secondary curriculum and instruction, offered by the School of Teacher Education.

Associateships
Graduate teaching associateships in mathematical sciences are available to qualified students. Support for qualified candidates may also be available through the School of Teacher Education, through the Center for Research in Mathematics and Science Education or through employment on faculty research grants. Applications are available from the appropriate campus offices.

All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin.

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy as described in Part Four of this bulletin. In addition, students seeking the Master of Arts degree for teaching service must have passed a qualifying examination in mathematics education.

Specific Requirements for the Master of Arts Degree for Teaching Service in Mathematics
(Major Code: 17011) (SIMS Code: 776305)
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the students must complete a graduate program of at least 30 units, 24 of which must be from the Department of Mathematics and Statistics. At least 15 of the 24 must be 600- and 700-numbered courses. A student’s program must be prepared in conference with and approved by the graduate adviser.

The two specializations leading to the Master of Arts for teaching service require completion of a specific pattern of graduate units described below.
Specialization in Mathematics for Community College Teaching (SIMS Code: 776320). This specialization is designed to satisfy the requirements for teaching service at the community college level. Students must have completed a bachelor's degree in mathematics (or equivalent) before entering the program and must have completed six units selected from Mathematics 521A, 524, and 534A. The third course can be taken prior to entrance to the program or as part of the 30-unit degree requirements.

Plan A requires Mathematics 600, 601, 602, and Mathematics Education 603; six units selected from Mathematics 509, 720, Mathematics Education 604, 605, 606; nine units of electives selected with the approval of the adviser; and Mathematics 799A, Thesis.

Plan B requires Mathematics 600, 601, 602, and Mathematics Education 603; nine units selected from Mathematics 509, 720, Mathematics Education 604, 605, 606; and nine units of electives selected with the approval of the adviser. In addition, students must pass a comprehensive examination in mathematics education.

Specialization in Mathematics for Secondary Teaching (SIMS Code: 776351). This specialization is designed to strengthen the mathematical background of secondary teachers, while providing coursework to better understand the learning and teaching of mathematics in grades 7-12. Students should have the equivalent of a bachelor's degree in mathematics before entering the program.

Plan A requires Mathematics 524; Mathematics Education 603; three units selected from Mathematics 510, 511, 600; three units selected from Mathematics 521A or 601; three units selected from Mathematics 534A or 602; six units selected from Mathematics 509, 720, Mathematics Education 604, 605, 606; six units of electives selected with the approval of the adviser; and Mathematics 799A, Thesis.

Plan B requires Mathematics 524; Mathematics Education 603; three units selected from Mathematics 510, 511, 600; three units selected from Mathematics 521A or 601; three units selected from Mathematics 534A or 602; nine units selected from Mathematics 509, 720, Mathematics Education 604, 605, 606; and six units of electives selected with the approval of the adviser. In addition, students must pass a comprehensive examination in mathematics education.

Master of Arts Degree in Education
Concentration in Mathematics Education (K-8)
(Major Code: 17012)

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

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

2. Core Program (12 units):
   - MTHE 600 Teaching and Learning Mathematics in Early Grades (Pre-K to 4) (3)
   - MTHE 601 Teaching and Learning Mathematics in the Middle Grades (3)
   - MTHE 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)
MTHE 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)

4. Research (9 units):
   - ED 690 Methods of Inquiry (3)
   - ED 795A Seminar (3)
   - ED 795B Seminar (3)

Section II.
Doctoral Program
http://crmse.sdsu.edu/msed

General Information
San Diego State University and the University of California, San Diego, offer jointly a doctoral program in mathematics and science education. The program faculty at SDSU are members of the College of Sciences and the College of Education and are affiliated with the Center for Research in Mathematics and Science Education (CRMSE). They represent a number of different disciplines, including biology, geological sciences, mathematics, physics, psychology, and teacher education. The program at UCSD, also an interdisciplinary group, are members of the Division of Natural Sciences (biology, chemistry, mathematics, and physics) or the Division of Social Sciences (cognitive science, philosophy, and sociology). The program is administered under the College of Sciences at SDSU and under the Division of Natural Sciences at UCSD.

The research interests of the participating faculty members cover a wide range of issues in the learning and teaching of mathematics and the sciences. Graduates of the program will be qualified to take a variety of professional positions, including faculty appointments in universities, colleges, and community colleges; specialist positions in public school districts; and out-of-school employment in settings that require expertise in mathematics and science education.

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

San Diego State University:
Coordinator: Joanne Lobato
Graduate Adviser: Randolph A. Philipp
Staff Adviser: Deb Escamilla

Doctoral Program Members: Bezuk, Bowers, Chizhik, Houle, Lamb, Lobato, Nemirovsky, Nickerson, Oechel, Philipp, Rasmussen, Reed, Ross, Unsworth, Santa Cruz, Williams

University of California, San Diego:
Coordinators: Jeff Rabin and Gabriele Wienhausen
Graduate Advisers: John Czworkowski and Jeff Rabin
Staff Adviser: Sherry Seethaler

Doctoral Program Members: Alac, Barber, Brydges, Cole, Czworkowski, Datnow, Eggers, Halter, Heyman, Levin, Magde, Núñez, Rabin, Remmel, Sawrey, Simon, Weizman, Wienhausen
Admission to Doctoral Study

Applicants for admission to the doctoral program in mathematics and science education must meet the general requirements for admission to both universities with classified graduate standing as outlined in the respective current catalogs. Applicants must also meet the special requirements of this program. These include: (a) an acceptable baccalaureate degree in mathematics or science (or a related discipline); (b) a master’s degree, or its equivalent, in biology, chemistry, physics, or mathematics; (c) a GPA of at least 3.25 in the last 30 semester (or 45 quarter) units of upper division work and at least a 3.5 in the graduate work attempted; (d) good standing in the last institution attended; (e) suitable scores in quantitative, verbal, and analytic sections of the Graduate Record Examinations.

Students with a master’s degree in mathematics education can also be considered for admission if they meet the following requirements: (a) a bachelor’s degree in mathematics; (b) a master’s degree in mathematics education that includes graduate level mathematics courses in analysis and algebra; and (c) coursework in geometry at the advanced undergraduate or graduate level. The GPA, GRE, and graduate standing requirements specified in the previous paragraph must also be met. Students entering the program with a master’s degree in mathematics education are required to take additional mathematics courses as specified in “Specific Requirements for the Doctor of Philosophy Degree.” Students with a master’s degree in physics education, chemistry education, or biology education should contact the MSE 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. Four research apprenticeship experiences:
SDSU: MSE 801 and
SDSU: MSE 802 and UCSD: MSED 295, and
SDSU: MSE 820 or UCSD: MSED 298.

B. Core courses in Mathematics or Science Education.
UCSD: MSED 296A, 296B, 296C and
SDSU: MTHED 603.
Science Education students must also take UCSD: MSED 290.
Mathematics Education students must select two of the following additional courses: SDSU: MTHED 600, 601, 604, 605, 606, 607.

C. Three courses on quantitative and qualitative research methods.
SDSU: MSE 810 and one of the following sequences:
UCSD: EDS 287, 288 or
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 or MSED 295.

F. Two courses from different categories are selected with advisers according to the student’s needs and background:

(3) Mathematics and Science: Graduate level courses in biology, chemistry, mathematics, or physics.
(4) Teaching Experience: An option for students who have not yet had teaching experiences at both the K-12 and collegiate levels is to take a second teaching practicum.
(5) Other. Other types of courses (at the graduate or upper division undergraduate level) can be approved by the advisers if they contribute to a coherent program.

G. Three doctoral research courses:
SDSU: MSE 830, 899 and
UCSD: MSED 299.

Beyond these requirements, no specified number of courses is required for the doctoral degree. It is expected, however, that all the doctoral students will supplement the requirements with electives that contribute to individual career objectives.
Additional Requirements for Students Entering with a Master's Degree in Mathematics Education. Students who are admitted into the doctoral program with a master's degree in mathematics education will increase the breadth and depth of their mathematical knowledge by fulfilling the requirements specified for Option A or Option B:

Option A.
UCSD: MATH 240A, 240B, 240C and
Pass the UCSD comprehensive examination on analysis at the master's level and
One graduate algebra course: UCSD: MATH 200A or SDSU: MATH 627A or 623. MATH 623 can only be selected if the student has already taken a graduate level abstract algebra course.

Option B.
Select two of SDSU: MATH 627A, 627B, 623, and
Pass the SDSU comprehensive examination on algebra at the master's level and
UCSD: MATH 240A
Whether the student selects Option A or Option B, the year-long sequence in algebra or analysis must be taken in Year 1 of the doctoral program. All of the requirements for Option A or Option B must be completed prior to the second year examination; however, students are strongly encouraged to fulfill all of the requirements in Year 1. A grade of B or better must be earned in each course.

Examinations. Students in the doctoral program will be evaluated at the following levels:

(1) First Year Evaluation. The student's ability to master graduate level course material may be assessed after completion of no more than 24 semester units of coursework. This evaluation may take place not later than the third semester of the student's enrollment in the program. The evaluation will be based on the student's performance in coursework and on indicated research competence, and it will be undertaken by the student's advisory committee together with instructors from the student's first year courses.

(2) Comprehensive Examinations. At the end of the second year, the student will take a written comprehensive examination in general cognition and an oral examination on issues of learning pertinent to the student's area of specialization.

(3) Oral Examination. During the third year in the program, the student will make an oral presentation to the dissertation committee to accompany a written proposal for the doctoral thesis. The student will be questioned on both the topic of the investigation and on the proposed research methodology. Upon successful completion of this presentation, the student will be recommended for advancement to candidacy for the doctoral degree.

(4) Dissertation Defense. After completion of the dissertation, the candidate will present a public defense of the doctoral dissertation. A copy of the dissertation must be made available to the doctoral faculty at both institutions four weeks prior to the defense. Copies of the abstract of the dissertation, along with the announcement of the defense, must be publicly available four weeks before the defense. The student's dissertation committee will make a recommendation to the graduate dean to pass or fail the student.

Faculty Advisers. Upon admission to the doctoral program, the program directors will assign each student a faculty adviser at both universities. The faculty advisers will serve as advisers until the student's dissertation committee is appointed.

Dissertation Committee. The dissertation committee will be composed of five members with at least two faculty members from each campus. The student will select members of the dissertation committee in consultation with program faculty and the graduate advisers.

Dissertation. Following the successful completion of all prescribed coursework and qualifying examinations, the major remaining requirement for the Ph.D. degree will be the satisfactory completion of a dissertation consisting of original research carried out under the guidance of the major professor. Approval of the completed dissertation attests that an organized investigation that expands the frontiers of knowledge and understanding in mathematics and science education has been carried out.

Award of the Degree. The Doctor of Philosophy degree in Mathematics and Science Education will be awarded jointly by the Regents of the University of California and the Trustees of The California State University in the names of both cooperating institutions.

Financial Support
San Diego State University and the University of California, San Diego have a number of research and teaching associateships available to support students admitted to the Joint Doctoral Program. All students applying to the program will be considered for financial support.

Section III. Certificate Programs

Mathematics Specialist Certificate
(Offered through the College of Extended Studies)
The mathematics specialist certificate program, prepares credentialed teachers to become mathematics specialists in the elementary grades. Two different certificates are offered, one focusing on the primary grades and the other on the upper elementary grades. Persons earning the certificates will develop special expertise in the teaching of mathematics in elementary schools. For application or further information, contact Dr. Nadine S. Bezuk (nbezuk@mail.sdsu.edu).

Prerequisites for admission include the following:
1. Teaching credential.
2. Two years of classroom teaching experience.
3. Two letters of recommendation.

Requirements for the primary mathematics specialist certificate (12 units):
2. Six units to include Mathematics Education 571 and 572.

Requirements for the upper elementary mathematics specialist certificate (12 units):
2. Six units to include Mathematics Education 573 and 574.

Students must pass all courses with 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  
(Offers 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 adviser.

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 574. 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 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 for increasing children's achievement and understanding of 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.  
Topics 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.  
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 mathematician or science.

MSE 807. Specially Designed Practicum (3) Cr/NC/RP
Prerequisite: Admission to doctoral program in Mathematics and Science Education.
Practical experience to assist students in gaining experience in career they have selected.

MSE 810. Seminar in Research Design (3)
Prerequisites: Admission to doctoral program in Mathematics and Science Education; Psychology 670A, and consent of instructor.
Issues such as analysis of protocols, problems of measurement in evaluation of learning, development, and assessment of cognitive models in learning in mathematics and science.

MSE 820. Research Project (3-6) Cr/NC/RP
Prerequisite: Admission to doctoral program in Mathematics and Science Education.
Participation in an ongoing research project and development of a related study.

MSE 830. Research Seminar (3)
Prerequisite: Successful completion of qualifying examination. Students and faculty present ongoing research for discussion and critique.

MSE 897. Doctoral Research (1-15) Cr/NC/RP
Prerequisite: Mathematics and Science Education 820.
Independent investigation in general field of 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 504A. Reasoning: Quantitative 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 506A. Algebra in the Middle Grades I (3)
Prerequisites: Teaching credential and consent of instructor.
Mathematical foundations that underlie concepts and procedures emphasized in algebra I and algebra II as taught at middle and high school level, to include focus on real number system, ratios, proportional reasoning, equality, number theory, and proof.

MATH 506B. Algebra in the Middle Grades II (3)
Prerequisites: Mathematics 506A, practicing teachers with valid teaching credential, and consent of instructor.
Mathematical foundations that underlie concepts and procedures emphasized in algebra I and algebra II as taught at middle and high school level, to include focus on functions in context of relations, patterns, and graphing.

MATH 507A. Functions and Study of Change I (2)
Prerequisites: Mathematics 506B, practicing teachers with valid teaching credential, and consent of instructor.
Mathematical ideas surrounding linear functions and change to include proportionality, slope, and graphing. Arithmetic and geometric sequences.

MATH 507B. Functions and Study of Change II (3)
Prerequisites: Mathematics 507A, practicing teachers with valid teaching credential, and consent of instructor.
Mathematical ideas surrounding nonlinear functions and variable rates of change to include quadratic and exponential situations.
GRADUATE COURSES

MATH 600. Geometrical Systems (3)
Prerequisites: Mathematics 521A and an upper division course in geometry.
Ordered and affine geometries, decompositions, dilations. Projectivities and projective space. Absolute geometry, isometries, groups generated by inversions.

MATH 601. Topics in Algebra (3)
Prerequisites: Mathematics 521A and 534A.
Unique factorization domains, rings and ideals, groups, algebraic field extensions. A course designed for secondary school teachers.

MATH 602. Topics in Analysis (3)
Prerequisites: Mathematics 521A and 534A.
Topics in analysis, including the real number system, convergence, continuity, differentiation, the Riemann-Stieltjes integral, complex analysis. Designed to give the secondary teacher a broad understanding of the fundamental concepts.

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
Marian Liebowitz, D.M.A., Professor of Music
Joseph Waters, Ph.D., Professor of Music
Bill Yeager, M.M., Professor of Music
Kevin M. Delgado, Ph.D., Associate Professor of Music
(Graduate Adviser)
Todd Rewoldt, D.M.A., Associate Professor of Music
Matthew Rowe, M.M., Associate Professor of Music
Eric S. Smigel, Ph.D., Associate Professor of Music
Richard Thompson, M.M., Associate Professor of Music
Patrick M. Walders, D.M.A., Assistant Professor of Music

Applied Music Instruction

Bassoon: Martchev, V.
Clarinet: Zhao
French Horn: Kitelinger
Jazz Studies: Boss
Jazz Guitar: Helzer, Thompson, Yeager
Non-Western Instruments: Specialists from specific cultures as available each semester
Oboe: Conaty, Skuster
Organ: Sokol
Percussion: Cohen, Holguin
Piano: Follingstad
Piano Pedagogy: Martchev
 Saxophone: Rewoldt, Rekevics
  Trombone: Covington, Starr
  Trumpet: Cannon, Wilds
  Tuba: Dutton
  Viola: Chen, Maril
  Violin: Tsai
  Voice: Nikkel, Sokol, Toral, Tweed

Dance

Joseph W. Alter, M.F.A., Associate Professor of Dance
Leslie Seiters, M.F.A., Associate Professor of Dance

Scholarships

Information on music scholarships may be obtained by writing to the chair, Music Scholarship Committee, School of Music and Dance, San Diego State University.

SDSU GRADUATE BULLETIN 2013-2014

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 and musicology. Piano pedagogy and theory are currently not accepting new graduate students. Master of Music students may specialize in composition, conducting, jazz, or performance.

Graduate students are prepared for careers that encompass scholarly research, teaching, performing, or creating new works.

Composition: Individual composition studies integrated with an awareness of global music practices.

Conducting: Literature and score analysis, hand techniques, rehearsal techniques, general preparation and performance in both the choral and instrumental areas.

Ethnomusicology: Study of global music with emphasis on cultural context, representation, ethnography, fieldwork, and performance.

Jazz Studies: Education, research, performance, and composition in all styles of jazz.

Musicology: With the approval of the faculty, students may select a topic in medieval, renaissance, baroque, classical, romantic, twentieth century music, or American music.

Performance: Performance studies are offered on all instruments and voice.

Piano Pedagogy: Preparation of the teacher of the child, adolescent, or adult students. (Currently not accepting new graduate students)

Theory: Comprehension of and facility with historical analytic techniques. (Currently not accepting new graduate students)

The 78,000 square-foot music building, completed in 1970, includes a 300-seat recital hall, rehearsal rooms for instrumental and choral organizations, an electronic music studio, two class-piano laboratories, 71 individual practice rooms, and approximately 160 pianos and 800 other musical instruments. The university library contains an extensive collection of over 75,000 music books and scores.

The School of Music and Dance has a 24-station student computer laboratory that provides facilities for computer assisted instruction in music theory and ear training, software programs for graphics, music composition, and notation.

The electronic music composition studio includes the latest electronic music equipment available.

The School of Music and Dance houses numerous ethnic instruments including Balinese and Javanese Gamelans and numerous other musical instruments of the world.

Statement on Computers

Students must become competent in the operation of personal computers to include word processing software, presentation software, web-based applications, and music notation software. Students, especially those planning to pursue the composition or electro-acoustic composition track, are encouraged to own a Macintosh laptop computer capable of running sophisticated music notation/composition software. For additional information regarding suggested platform and software, 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 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 the next section.

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 to12-page paper on any topic of music history that reflects exceptional skills in critical thinking, to include references to appropriate literature, and demonstrates competence in spelling, grammar, organization, and citation format; and (d) 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 with at least 18 units in 600- and 700-numbered courses and the following core: Music 612 or 613, 652, 653 or 654, and 690.

Students may choose either Plan A or Plan B. Students in Plan A are allowed 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, 651K, 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: Music 541, 542, 554, 641, 651 (4 units);
and 766 (Plan B) or 799A (Plan A).
Electives: Three units
Piano Pedagogy (SIMS Code: 665348)

Core: Music 613, 652, 690.
Program: Music 541, 542, 554, 641, 651 (4 units);
and 766 (Plan B) or 799A (Plan A).
Electives: Two units.

Refer to Graduate Music Student Handbook for further details.

Admission to Master of Music

In addition to meeting the admission requirements listed above, students who seek a performance specialization must pass an audition. Students seeking a composition specialization must submit a comprehensive creative portfolio of original work. Those seeking a conducting specialization must submit a DVD of their conducting expertise (rehearsal and performance) and complete an on-campus interview/audition. The Master of Music is available with the following specializations: composition, conducting, performance and jazz studies. Please consult the School of Music and Dance Web site at http://musicdance.sdsu.edu for further information concerning admission.
Specific Requirements for the Master of Music Degree

(Major Code: 10041) (SIMS Code: 665303)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete a 30-unit graduate program, of which at least 18 must be in 600- and 700-numbered courses.

In order to be advanced to candidacy, students in vocal performance must satisfy either a music foreign language examination or satisfactorily complete one introductory college semester in French, German, and Italian.

A final oral comprehensive examination is required for all Master of Music candidates.

In addition to the requirements stated above, students must complete requirements in the specific program selected:

Composition (SIMS Code: 665362)
- Core: Music 613, 652, 690.
- Program: Music 507; three additional units from Music 613; three additional units from Music 613 or 614; 651 (9 units); 767.
- Electives: Two units.

Conducting (SIMS Code: 665372)
- Core: Music 613, 652, 690.
- Program: Music 554, 570-589 (2 units), 651 (9 units); 767.
- Electives: Five units.

Jazz Studies (SIMS Code: 665378)
- Core: Music 614, 653, 690.
- Program: Music 651 (9 units), six units selected from Music 507, 566A-566B, 570-589 (1-3 units), 590; 767.
- Electives: Three units.

Performance (SIMS Code: 665386)
- Core: Music 613, 652, 690.
- Program: Music 554, 570-589 (vocal majors must choose opera) (3 units), 651 (9 units); 767.
- Electives: Four units.

Refer to Graduate Music Student Handbook for further details.

Artist Diploma Advanced Certificate

(Certificate 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, 518, 541, 542, 543, 554 (2-4 units), 566A-566B (for jazz studies students only), 590, 641, 766, or 1-3 additional units of 798. Vocal students must demonstrate competency equal to a college-level course in French, German, and Italian.

The graduate adviser will be responsible for verifying a student's satisfactory completion of the academic requirements established for the program and for forwarding a completed copy of the verification form to Graduate and Research Affairs. Additionally, this adviser will direct the student into elective coursework that best suits the needs of the individual student.

All units in this certificate program are applicable to the various specializations in the M.A. in Music and the M.M. degree programs. However, not all courses are required in each specialization. Please see the requirements for each graduate specialization listed in the Graduate Bulletin.

Courses Acceptable on Master's Degree Programs in Music (MUSIC) (DANCE)

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

Music (MUSIC)

UPPER DIVISION COURSES

MUSIC 507. Composition Laboratory (1)
Three hours of laboratory.
Prerequisites: Music 207 with a grade of C (2.0) or better and consent of instructor.
Continuation of Music 207. Maximum credit two units.

MUSIC 515. Professional Orientation for Music Performers (2)
One lecture and two hours of activity.
Prerequisite: Twelve units of upper division or graduate standing in B.M. or M.M. degree. Others by consent of instructor.
Conditions met in professional music world as well as opportunities available. Auditions, contracts, legal and tax responsibilities, media and press promotion, grants, professional management, apprenticeships.

MUSIC 516. Performance Practice Forum (1)
Two hours of activity.
Prerequisite: Consent of instructor. Musical style, repertoire, presentation, and evaluation as embodied in a musical performance. May be repeated with new content. Maximum credit four units.

MUSIC 518. Community Performance Practicum (2)
One lecture and two hours of activity.
Practicum for performers, educators, administrators, researchers, or clinicians intending to develop and implement performing arts outreach programs in the community. (Formerly numbered Music 518A.)

MUSIC 530. Music Internship (1-3)
Two hours of activity per unit.
Prerequisite: Upper division or graduate standing in a music degree program.
Work with approved music professionals and agencies off-campus to include education, performance, production, and administration under the combined supervision of agency personnel and instructor. Maximum credit six units.

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.

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.
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.
Current advanced analytic techniques in various areas of music. May be repeated with new course content. See Class Schedule for specific content. Maximum credit six units applicable to a bachelor's and master's degree.

MUSIC 560. Music and Visual Media (3)
Two lectures and three hours of activity.
Prerequisite: Music 460.
Techniques and aesthetics of combining music/sounds and visual elements, including contemporary film scoring techniques, sound design for installations and performance art, video game scoring and experimental immersive 3-D virtual reality.

MUSIC 561. Area Studies: Ethnomusicology (3)
Prerequisite: Music 305B with a grade of C (2.0) or better.
Music of a specific culture. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

MUSIC 566A-566B. Jazz Arranging and Composition (2-2)
Prerequisite: Graduate or upper division standing in music.
An analysis of jazz compositions and arrangements; arranging and composing for large and small jazz ensembles. May be repeated with new course content. See Class Schedule for specific content. Maximum credit six units applicable to a bachelor's degree. Credit for 566A and 566B applicable to a master's degree.

MUSIC 570. Advanced Chamber Music (1)
Three hours.
Prerequisite: Consent of instructor.
Study and public performance of established repertory as well as new compositions. Sections for string, woodwind, brass, piano, vocal, and mixed ensemble groups of three or more players. May be repeated with new course content. See Class Schedule for specific content. Maximum credit four units.

MUSIC 575. 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 582. 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)
Students will be assigned to appropriate class sections within selected undergraduate area as instructional assistants under staff supervision.

MUSIC 596. Special Topics in Music (1-3)
A specialized study of selected topics from the several areas of music. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

MUSIC 598. Music Review: History, Analysis, and Aural Skills (3) Cr/NC
Prerequisite: Admission to the graduate program.
Review basic concepts of music theory, aural skills, and music history required for full candidacy in the graduate music program. Not applicable to the master's degree in music.

GRADUATE COURSES

MUSIC 611. Seminar in Musicology (3)
Systematic study of music based upon application of scientific investigation, philosophical speculation, modern historiography, and related academic disciplines in humanities and social sciences.

MUSIC 612. Seminar in Ethnomusicology Fieldwork Theory and Method (3)
Prerequisite: Credit or concurrent registration in Music 690.
Theory and method of ethnomusicology fieldwork research: ethnographic research, participant-observation, audio-visual documentation, musical representation and analysis, ethics; student fieldwork projects.

MUSIC 613. Seminar in Music Theory (3)
Prerequisite: Classified standing.
Current advanced analytic techniques in various areas of music. Maximum credit nine units applicable to a master's degree.

MUSIC 614. Seminar in Music Theory: Conceptual Analysis of the Jazz Idiom (3)
Current advanced analytic techniques in the jazz idiom.
MUSIC 641. Piano Pedagogy: Adolescent to Adult (3)
Two lectures and three hours of laboratory.
Prerequisite: Graduate standing.
Study of music through the piano for adolescent to adult with analysis and application of appropriate teaching procedures and learning theories. Analysis of literature with corresponding techniques, musical skills, and creativity. Supervised teaching.

MUSIC 651. Advanced Performance Studies (1-3)
Thirteen one-half hour private lessons (1 unit); thirteen one-hour private lessons (2 units); nineteen one-half hours private lessons (3 units).
Prerequisite: Audition before music faculty. Music 651B for one unit includes M.F.A. in drama students.
Advanced studies in technical, stylistic, and aesthetic elements of artistic performance culminating in a graduate recital. Maximum credit nine units; four units may be applicable to the 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 660. Seminar in Research Procedures in Music (3)
Reference materials, bibliography, investigation of current research in music, processes of thesis topic selection and techniques of thesis 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 696 and 696 applicable to a master’s degree with approval of the graduate adviser.

MUSIC 699A. Thesis or Project (3) Cr/NC
Prerequisites: Advancement to candidacy. Consent of school director.
Preparation of a project or thesis for a master’s degree.

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

MUSIC 799A. Thesis or Project (3) Cr/NC
Prerequisites: Advancement to candidacy. Consent of school director. Selection of literature for recital program of at least one hour in length; theoretical analysis and historical study of scores chosen; preparation and public performance; and examination before a graduate committee of music department faculty. Conductors must conduct a public performance.

MUSIC 799B. Thesis or Project Extension (0) Cr/NC
Registration required in any semester or term following assignment of RP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.

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

OFFICE: Physics 131
TELEPHONE: 619-594-6240

Program Coordinator: Phoebe E. Roeder, Ph.D.

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.
Nursing

In the College of Health and Human Services

OFFICE: Hardy Tower 58
TELEPHONE: 619-594-5357
FAX: 619-594-2765
http://nursing.sdsu.edu

Faculty
Philip A. Greiner, D.N.Sc., Professor of Nursing, Director of School
Janet L. Brlenner, Ph.D., F.A.A.N., Professor of Nursing
Willa Fields, D.N.Sc., Professor of Nursing
Lauren P. Hunter, Ph.D., C.N.M., Professor of Nursing
Linda Robinson, Ph.D., Professor of Nursing
Lorraine T. Fitzsimmons, D.N.S., F.N.P., A.N.P.-B.C.,
Associate Professor of Nursing
Sue A. Hadley, D.N.S., G.N.P., A.N.P.-B.C.,
Associate Professor of Nursing
Young-Shin Lee, Ph.D., Associate Professor of Nursing
Mina Attin, Ph.D., Assistant Professor of Nursing
Michael Gates, Ph.D., Assistant Professor of Nursing

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Associate Professor of Nursing
Young-Shin Lee, Ph.D., Associate Professor of Nursing
Mina Attin, Ph.D., Assistant Professor of Nursing
Michael Gates, Ph.D., Assistant Professor of Nursing

General Information

The School of Nursing offers a graduate curriculum leading to the Master of Science degree in nursing. Graduates of the nursing program will be prepared to function as middle or executive-level nursing administrators, nurse-midwives, clinical nurse specialists, and/or nurse practitioners. There are three concentrations: Women’s Health and Midwifery, Advanced Practice Nursing of Adults and the Elderly, and Leadership in Nursing Care Systems. Students in the Women’s Health and Midwifery Concentration may specialize in Nurse-Midwife, Nurse-Midwife and Midwifery Nurse Practitioner, or Women’s Health Nurse Practitioner. Students in Advanced Practice Nursing of Adults and the Elderly are prepared as adult/gerontology nurse practitioners and clinical nurse specialists and may specialize in Adult Care/Critical Care. The graduate program requires a minimum of 36 units. The program is designed for either full- or part-time study. All graduates of the program are prepared for beginning roles as nurse researchers and for further educational opportunities in doctoral studies. The School of Nursing has clinical contracts with all of the leading nursing or related experience is highly recommended. Prior experience is not required for concentration in Nursing Leadership in Health Care Systems.

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 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.

(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

(1) Departmental application to the School of Nursing available at http://nursing.sdsu.edu/programs-ms-application.php;

(2) Three letters of recommendation attesting to capability to do graduate work in nursing;

(3) A personal statement;

(4) One copy of unofficial transcript;

(5) Copies of GRE (and TOEFL, if applicable) scores;

(6) Current resume or vitae.

Section I.

Master’s Degree Programs

Admission to the Degree Program

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

6. Have satisfactorily completed a course in statistics. (Statistics 250 or equivalent with a grade of C or better.)

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 12 semester units may be accepted in transfer from an accredited School of Nursing.

### Community Health Nursing Concentration

(SIMS Code: 554621)

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<thead>
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<td>NURS 608</td>
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<td>NURS 684</td>
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Not admitting new students for the Community Health Nursing Concentration.

### Specialization in School Nursing

(SIMS Code: 554633)

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<td>NURS 632</td>
<td>3</td>
</tr>
<tr>
<td>NURS 799A</td>
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</tbody>
</table>

Not admitting new students for the Specialization in School Nursing.

Students admitted to the school nursing specialization within the community health nursing concentration will pursue a program of studies leading to a Master of Science in nursing degree and a school nurse services credential. In addition to the Master of Science degree curriculum, to receive the school nurse services credential, students must complete a three unit audiometry course selected with approval of adviser. Required courses are as follows:

#### Core Courses

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<th>Course</th>
<th>Units</th>
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<td>NURS 684</td>
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#### Community Health Nursing Concentration Courses

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#### Specialization Courses

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### Women's Health and Midwifery Concentration Courses

(SIMS Code: 554622)

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### Specialization as a Nurse-Midwife

(SIMS Code: 554651)

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

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#### Specialization Courses

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<td>NURS 610</td>
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<td>NURS 745</td>
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Total Semester Units 54

### Specialization as a Women's Health Nurse Practitioner

(SIMS Code: 554652)

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 women's health nurse practitioner specialization are as follows:

#### Core Courses

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<th>Units</th>
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<td>NURS 608</td>
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<td>NURS 684</td>
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Total Units 12

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Nursing

SDSU GRADUATE BULLETIN 2013-2014
Women's Health and Midwifery Concentration Courses

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<td>NURS 632</td>
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<td>NURS 799A</td>
<td>Thesis OR NURS 798 (Plan B)</td>
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Specialization Courses

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<td>NURS 501</td>
<td>Advanced Health Assessment and Health Promotion</td>
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<td>NURS 501L</td>
<td>Advanced Health Assessment and Health Promotion Laboratory</td>
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<td>NURS 610</td>
<td>Pathophysiology in Adults and Elderly</td>
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<td>Women's Health Assessment and Management I</td>
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<td>Nurse-Midwifery Intrapartum/Newborn Assessment and Management</td>
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<td>NURS 654</td>
<td>Advanced Practice Nursing: Primary Care I</td>
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<td>Clinical Pharmacology for Advanced Practice Nursing</td>
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<td>Integrated Women's Health/Nurse-Midwifery</td>
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Total Semester Units: 60

Specialization as a Women's Health Nurse Practitioner

Graduates meet requirements for certification and licensure by the California Board of Registered Nursing. Graduates are eligible to sit for select national certification examinations. The program is accredited by the Commission on Collegiate Nursing Education (CCNE) and certificed by the National Certification Corporation (NCC). Part-time (3 to 4 years) and full-time (2 years) options of study are available. Required courses and units for the two year women's health care nurse practitioner specialization are as follows:

Core Courses

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<tr>
<td>NURS 604B</td>
<td>Theoretical and Research Bases of Nursing</td>
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<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 Semester Units: 12

Women's Health and Midwifery Concentration Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</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>

Specialization Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 501</td>
<td>Advanced Health Assessment and Health Promotion</td>
<td>3</td>
</tr>
<tr>
<td>NURS 501L</td>
<td>Advanced Health Assessment and Health Promotion Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>NURS 610</td>
<td>Pathophysiology in Adults and Elderly</td>
<td>3</td>
</tr>
<tr>
<td>NURS 636</td>
<td>Women's Health Assessment and Management I</td>
<td>3</td>
</tr>
<tr>
<td>NURS 637</td>
<td>Women's Health/Nurse-Midwifery</td>
<td>2</td>
</tr>
<tr>
<td>NURS 639</td>
<td>Women's Health/Nurse-Midwifery</td>
<td>6</td>
</tr>
<tr>
<td>NURS 654</td>
<td>Advanced Practice Nursing: Primary Care I</td>
<td>3</td>
</tr>
<tr>
<td>NURS 658</td>
<td>Clinical Pharmacology for Advanced Practice Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 744</td>
<td>Women's Health/Nurse-Midwifery</td>
<td>3</td>
</tr>
<tr>
<td>NURS 745</td>
<td>Women's Health/Nurse-Midwifery</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Semester Units: 49

Advanced Practice Nursing of Adults and the Elderly Concentration

(SIMS Code: 554629)

Specialization in Acute/Critical Care Nursing

(Clinical Nurse Specialist and Nurse Educator Preparation)

(SIMS Code: 554635)

All graduates meet requirements for clinical nurse specialist (CNS) certification in California and are eligible to sit for national CNS certification in acute/critical care or medical surgical nursing.

Required courses for the Master of Science degree with a concentration in advanced practice nursing of adults and the elderly and a specialization in acute/critical care nursing (CNS) and nurse educator preparation are as follows:

Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 622</td>
<td>Quality Improvement and Program Evaluation in Nursing Systems Organizations</td>
<td>3</td>
</tr>
<tr>
<td>NURS 644</td>
<td>Program and Curriculum Development in Nursing Education</td>
<td>3</td>
</tr>
<tr>
<td>NURS 645</td>
<td>Teaching and Learning in Nursing Education</td>
<td>3</td>
</tr>
<tr>
<td>NURS 646</td>
<td>Nursing Education Practicum</td>
<td>3</td>
</tr>
<tr>
<td>NURS 751</td>
<td>Advanced Practice Nursing: Acute/Critical Care Theory and Technology</td>
<td>3</td>
</tr>
<tr>
<td>NURS 753</td>
<td>Advanced Practice Nursing: Acute and Critical Care Practicum</td>
<td>6</td>
</tr>
</tbody>
</table>

Total Semester Units: 21

Advanced Practice Nursing of Adults and the Elderly Concentration Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 501</td>
<td>Advanced Health Assessment and Health Promotion</td>
<td>3</td>
</tr>
<tr>
<td>NURS 501L</td>
<td>Advanced Health Assessment and Health Promotion Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>NURS 610</td>
<td>Pathophysiology in Adults and the Elderly</td>
<td>3</td>
</tr>
<tr>
<td>NURS 658</td>
<td>Clinical Pharmacology for Advanced Practice Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 799A</td>
<td>Thesis OR NURS 798 (Plan B)</td>
<td>3</td>
</tr>
</tbody>
</table>

Specialization Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</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>

(Nurse Practitioner and Clinical Nurse Specialist Preparation)

(SIMS Code: 554630)

All graduates meet requirements for nurse practitioner and clinical nurse specialist certification in California and are eligible to sit for select national certification examinations.

Required courses for the Master of Science degree with a concentration in advanced practice nursing of adults and the elderly and a specialization in acute/critical care nursing are as follows:

Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</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 Semester Units: 12
Nursing. Required courses for the concentration are as follows:

**Specialization Courses**

- **Units**
- NURS 501: Advanced Health Assessment and Health Promotion .................................................. 3
- NURS 501L: Advanced Health Assessment and Health Promotion Laboratory .......................... 1
- NURS 610: Pathophysiology in Adults and the Elderly ............................................................... 3
- NURS 654: Advanced Practice Nursing: Primary Care I ............................................................ 3
- NURS 655: Advanced Practice Nursing: Primary Care Practicum I ........................................ 6
- NURS 656: Advanced Practice Nursing: Primary Care II ......................................................... 3
- NURS 657: Advanced Practice Nursing: Primary Care Practicum II ....................................... 6
- NURS 658: Clinical Pharmacology for Advanced Practice Nursing ....................................... 3

Prescribed Electives: Three units selected with the approval of the concentration chair ............ 3

- NURS 799A: Thesis OR NURS 798 (Plan B) ............................................................................ 3

**Specialization Courses**

- **Units**
- NURS 751: Advanced Practice Nursing: Acute/Critical Care Theory and Technology ............... 3
- NURS 753: Advanced Practice Nursing: Acute and Critical Care Practicum ................................ 3

**Nursing Education Concentration**

(SIMS Code: 554641)

Admission currently suspended for the Nursing Education Concentration.

Graduates of the nursing education concentration will be prepared for positions in academic and/or clinical settings within three areas of specialization: Adult Health, Maternal/Newborn, and Pediatric Nursing. Required courses for the concentration are as follows:

**Core Courses**

- **Units**
- NURS 604A: Theoretical and Research Bases of Nursing ......................................................... 3
- NURS 604B: Theoretical and Research Bases of Nursing ......................................................... 3
- NURS 608: Nursing in the Health Care System ........................................................................... 3
- NURS 684: Information Systems for Nursing ............................................................................. 3

**Area of Concentration Courses**

- **Units**
- NURS 644: Program and Curriculum Development in Nursing Education .............................. 3
- NURS 645: Teaching and Learning in Nursing Education .......................................................... 3
- NURS 646: Nursing Education Practicum .................................................................................. 3
- NURS 799A: Thesis OR NURS 798 (Plan B) ............................................................................ 3

Directed elective: Education focus ............................................................................................... 3

**Advanced Clinical Content**

(students select one specialization)

**Adult Health** (SIMS Code: 554642)

- **Units**
- NURS 501: Advanced Health Assessment and Health Promotion .............................................. 3
- NURS 501L: Advanced Health Assessment and Health Promotion Laboratory ........................ 1
- NURS 610: Pathophysiology in Adults and the Elderly ............................................................... 3

**Maternal/Newborn** (SIMS Code: 554643)

- **Units**
- NURS 636: Women’s Health Assessment and Management ................................................. 3
- NURS 638: Nurse-Midwifery Intrapartum/Newborn Assessment and Management ............. 3
- NURS 658: Clinical Pharmacology for Advanced Practice Nursing ........................................ 3
- NURS 744: Women’s Health/Nurse-Midwifery Assessment and Management III ................ 3

**Pediatric Nursing** (SIMS Code: 554646)

- **Units**
- NURS 601: Assessment and Health Promotion of Children and Adolescents ............................ 4
- NURS 672: Primary Health Care of the School Aged Child ...................................................... 3
- CFD 537: Child Abuse and Family Violence .............................................................................. 3
- OR
- CFD 560: Theories in Socio-Emotional Development .............................................................. 3
- NURS 798: Special Study (Cr/NCR) .......................................................................................... 3

**Nursing Leadership in Health Care Systems Concentration**

(SIMS Code: 554645)

Required courses for the Master of Science degree with a concentration in nursing leadership in health care systems are as follows:

**Core Courses**

- **Units**
- NURS 604A: Theoretical and Research Bases of Nursing ......................................................... 3
- NURS 604B: Theoretical and Research Bases of Nursing ......................................................... 3
- NURS 608: Nursing in the Health Care System ........................................................................... 3
- NURS 684: Information Systems for Nursing ............................................................................. 3

**Area of Concentration Courses**

- **Units**
- NURS 620: Foundations of Nursing Administration Practice .................................................. 3
- NURS 622: Quality Improvement and Program Evaluation in Nursing Systems Organization ... 3
- NURS 624: Nursing Care Systems and Personnel Management ............................................. 3
- NURS 724: Nursing Systems Administration Practicum ............................................................... 3
- NURS 725: Financial Management in Health Systems ............................................................... 3
- OR
- P H 742A: Health Services Financial Management ................................................................... 3
- NURS 726: Advanced Nursing Systems Administration Practicum .......................................... 3

**Directed elective:** Three units selected with the approval of the concentration chair ............ 3

- NURS 797: Research .................................................................................................................. 3
- NURS 799A: Thesis OR NURS 798 (Plan B) ............................................................................ 3

**Total Units**

- 52
- 39
- 40
- 36
**Section II. Doctoral Program**

Admission currently suspended for the Doctor of Nursing Practice degree.

**General Information**
*(Major Code: 12033) (SIMS Code: 554682)*

The Doctor in Nursing Practice (DNP) prepares nurse leaders to practice in or lead complex health care systems, manage diverse populations, and reduce disparities in health care outcomes. The expert practitioners prepared with the DNP degree are in demand as faculty members in California Schools of Nursing. The program is designed for advance practice nurses in nurse practitioner, clinical nurse specialist, and health care leadership roles. The program is built on the American Association of Colleges of Nursing’s Eight Essentials for the Doctor in Nursing Practice. The program is organized so that the working nurse is able to attend and complete this step in their education.

**Program Objectives**

- Graduate “leader-scholars” in advanced nursing practice who will be prepared with a blend of skills in clinical practice, translational research, and organizational leadership to enable them to design, evaluate, and continuously improve the context within which care is delivered.
- Prepare expert and scholarly clinicians and leaders to serve as faculty members to meet a present and growing shortage of doctorally prepared faculty in nursing.
- Meet the needs of California employers for clinicians who can function in leadership and advance nursing practice roles, who can design programs of care delivery that are locally acceptable, economically feasible, and which significantly impact health care outcomes.
- Increase the number of nurses in California who are able to influence health care policy and reduce disparities in health care outcomes for those who are sociodemographically and geographically disadvantaged.

The program will be offered as a post-master’s degree option. The MS to DNP curriculum builds on direct care or systems-focused competencies that were previously acquired through formal coursework leading to a Master of Science degree with a major in nursing or related field. Students who would like to acquire a new role (such as an administrator enrolling in an NP option) would need to complete additional courses in the selected area of role specialization. The appropriateness of any graduate work completed by an applicant will be evaluated and transfer credit may be limited. The creation of this option does not eliminate the BS to MS option. Students will still have the option of pursuing the traditional master’s degree to acquire advanced practice nursing, systems leadership and community health advanced practice competencies.

**Specific Requirements for the Doctor of Nursing Practice (DNP) Degree**

Admission to the program is competitive and successful applicants to the program will demonstrate as a minimum the following:

- Eligibility for admission to the SDSU graduate program;
- Master of Science with major in nursing from a regionally and nationally accredited program (an MS in a related field may be considered and may require additional coursework);
- Completion of a graduate level informatics course or demonstration of equivalent informatics competencies;
- Certification as an advanced practice nurse or midwife or demonstration of certification eligibility as appropriate to the nursing specialty area;
- Competitive master’s grade point average (at least 3.0) and GRE scores;
- An unencumbered license to practice nursing in California or in the state where the doctoral project and residency courses will be completed;
- One year of professional advanced practice nursing experience is preferred;
- Official transcripts of all postsecondary academic work;
- A written goal statement and a doctoral project idea supported with scholarly references;
- Three letters of reference from professional persons knowledgeable about the applicant’s practice experience, academic and nursing leadership potential;
- A personal interview relative to professional goals and challenges and area of doctoral project interest.

**Course Requirements for the DNP**

The DNP is a professional/practice degree, students in the program will be involved in evidence-based practice/translational research projects as part of coursework and clinical residency. Students are expected to complete the program in two years if attending full-time, three years if attending part-time. Students must complete a minimum 36 units with a maximum 45 units in order to complete the program.

**Required Courses for the DNP**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 644</td>
<td>Program and Curriculum Development in Nursing Education (3)</td>
</tr>
<tr>
<td>NURS 645</td>
<td>Teaching and Learning in Nursing Education (3)</td>
</tr>
<tr>
<td>NURS 600</td>
<td>Biostatistics for Advanced Practice Nursing (3)</td>
</tr>
<tr>
<td>NURS 801</td>
<td>Translational Research and Evidence-Based Practice (3)</td>
</tr>
<tr>
<td>NURS 802</td>
<td>Advanced Systems Leadership (3)</td>
</tr>
<tr>
<td>NURS 803</td>
<td>Epidemiology for Advanced Nursing Practice (3)</td>
</tr>
<tr>
<td>NURS 804</td>
<td>Proposals and Grant Development in Health Care (3)</td>
</tr>
<tr>
<td>NURS 805</td>
<td>Seminar in Health Policy, Ethics, and Advocacy (3)</td>
</tr>
<tr>
<td>NURS 806</td>
<td>Evidence-Based Practice DNP Project Synthesis (3)</td>
</tr>
<tr>
<td>NURS 807</td>
<td>Evidence-Based Practice DNP Project Implementation (3) Cr/NC</td>
</tr>
<tr>
<td>NURS 808</td>
<td>Evidence-Based Practice DNP Project Dissemination (3) Cr/NC</td>
</tr>
<tr>
<td>NURS 809</td>
<td>Doctorate of Nursing Practice (DNP) Residency (1-9) Cr/NC</td>
</tr>
<tr>
<td>NURS 810</td>
<td>Advanced Health Care Informatics and Knowledge Management (3)</td>
</tr>
</tbody>
</table>

The units for NURS 809 are variable and based on prior post-baccalaureate clinical hours; 1000 supervised post-baccalaureate clinical hours are needed to meet minimum requirements. Some students will need up to nine units to satisfy this requirement and others may require one or two units. Students will be expected to earn national certification in the appropriate specialty before advancing to candidacy if they are not nationally certified upon admission.

- During the Evidence-Based Practice DNP Project Synthesis course (NURS 806), the student works with a three person committee to design a doctoral nursing clinical practice project related to a population of interest. In the course of developing the synthesis project proposal, students will conduct an integrative review of the literature that demonstrates the state of the science and the significance of their proposed project. Preparation and defense of the project proposal is required.
- After the written project proposal is orally defended and subsequently approved by the committee, the student begins Evidence-Based Practice DNP Project Implementation (NURS 807). Institutional Review Board (IRB) approval must be obtained as appropriate before the project may be implemented. During this phase of the doctoral project the student collaborates with colleagues, clinical experts, and the clinical population of interest to implement the project.
- During Evidence-Based Practice DNP Project Dissemination (NURS 808), the student analyzes, evaluates, and disseminates the project in appropriate public forums and publications.
Advancement to Candidacy

All students must (1) Meet the general requirements for advancement to candidacy as required by San Diego State University; (2) Satisfactorily complete the faculty assessment and faculty evaluation of the progress they are making in their graduate course of study; (3) Complete a minimum of 15 units of the doctoral course of study.

The final examination will consist of written and orally presented reports of the project and are to be disseminated. Students will make at least one presentation at a peer-reviewed professional meeting and prepare a manuscript to be submitted for publication in a peer-reviewed journal.

Section III.
Credential and Certificate Program

School Nurse Services Credential
(Credential Code: 00600)

Admission currently suspended for the School Nurse Services Credential.

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, Hardy Tower, Room 58, or the School of Nursing Web site.

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>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 631</td>
<td>Community Health Nursing Practicum</td>
<td>3</td>
</tr>
<tr>
<td>NURS 632</td>
<td>Community Health Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 670</td>
<td>School Nursing Management Practices</td>
<td>3</td>
</tr>
<tr>
<td>NURS 672</td>
<td>Primary Health Care of the School-Aged Child</td>
<td>3</td>
</tr>
<tr>
<td>NURS 674</td>
<td>Health Education for School Nurses</td>
<td>3</td>
</tr>
<tr>
<td>SPED 500</td>
<td>Human Exceptionality</td>
<td>3</td>
</tr>
<tr>
<td>Audiology:</td>
<td>Three unit course selected with approval of adviser</td>
<td>3</td>
</tr>
<tr>
<td>Elective:</td>
<td>Graduate level course with education emphasis selected with consent of adviser</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Units 28

Nursing Education Certificate
(Certificate 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.sdstate.edu.

Students who enter the Advanced Certificate in Nursing Education and later decide they wish to transfer to the master's program in nursing education should consult with the graduate adviser. All courses in this certificate program are transferable to the master's degree in nursing education.

Admission requirements
2. Master's degree in nursing.

Program (12 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 644</td>
<td>Program and Curriculum Development in Nursing Education</td>
<td>3</td>
</tr>
<tr>
<td>NURS 645</td>
<td>Teaching and Learning in Nursing Education</td>
<td>3</td>
</tr>
<tr>
<td>NURS 646</td>
<td>Nursing Education Practicum</td>
<td>3</td>
</tr>
<tr>
<td>Elective:</td>
<td>Graduate level course with education emphasis selected with consent of adviser</td>
<td>3</td>
</tr>
</tbody>
</table>

Courses Acceptable on Master's and Doctoral 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 graduate adviser; concurrent registration in Nursing 501L.

Physical and psychosocial assessment techniques, health promotion strategies for select populations.

NURS 501L. Advanced Health Assessment and Health Promotion Laboratory (1)

Three hours of laboratory

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.
NURS 601. Assessment and Health Promotion of Children and Adolescents (4)
Three lectures and three hours of laboratory.
Prerequisite: Consent of school health credential adviser or graduate adviser or RN to BS adviser.
Assessing physical, emotional, psychosocial and mental health of children and adolescents from birth to 19 years in hospital and community settings. Strategies for individual and group assessment.
Age-appropriate interview techniques. Health promotion modalities.

NURS 604A. Theoretical and Research Bases of Nursing (3)
Integration of theory and research in nursing. Focus on theory development, testing, and evaluation. Research process in nursing including design, analysis, and utilization for professional nursing practice.

NURS 604B. Theoretical and Research Bases of Nursing (3)
Prerequisite: Nursing 604A.
Integration of theory and research in nursing. Focus on research ethics, measurement, publishing, and grant writing in professional nursing practice.

NURS 608. Nursing in the Health Care System (3)
Nursing in a changing health care delivery system. Organizational, economic, political, and professional concepts relevant to design and delivery of nursing care.

NURS 610. Pathophysiology in Adults and the Elderly (3)
Prerequisite: Consent of graduate adviser.
Physiologic alterations associated with acute and chronic illness in adults and the elderly as a basis for primary prevention and medical and nursing interventions.

NURS 620. Foundations of Nursing Administration Practice (3)
Analysis of communication concepts appropriate to a variety of complex nursing and health care delivery systems.

NURS 622. Quality Improvement and Program Evaluation in Nursing Systems Organizations (3)
Evaluation theories and concepts within a nursing care delivery system and health care organization. Concepts of quality management, consistent with accreditation criteria and professional standards of practice.

NURS 624. Nursing Care Systems and Personnel Management (3)
Issues related to personnel resources, staff development, staff utilization and collective bargaining in health care agencies and nursing care systems.

NURS 631. Community Health Nursing Practicum (3)
Nine hours per week.
Experience working with individuals and families of a selected community group applying theoretical knowledge within framework of nursing process.

NURS 632. Community Health Nursing (3)
Prerequisites: Nursing 415, 415L, and admission to school nurse or nurse-midwife programs.
Community and needs assessments. Community participation and transcultural considerations. Grant writing, ethical dilemmas, evidence-based practice, program planning, staffing, budgeting, and evaluation.

NURS 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.
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, 654, 658, 684.
Comprehensive assessment and management of women through the childbearing cycle and interconceptional period, with emphasis on prenatal care, labor and delivery, postpartum and the normal newborn.

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: Consent of graduate adviser.
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)
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 executive level manager in a selected health care system. Needs and individual objectives of the student are integrated into the experience.

NURS 725. Financial Management in Health Systems (3)
Prerequisite: Nursing 620 or Public Health 641 or 650. Health care economics, budget planning and management skills and financial analysis skills necessary to facilitate management decision making and writing business plans.

NURS 726. Advanced Nursing Systems Administration Practicum (3)
Nine hours of laboratory. Prerequisite: Nursing 724. Provides observation and guided administrative experience specific to the role and function of the executive level manager in a selected health care system. Individual needs and objectives of the student are integrated into the experience.

NURS 730. Advanced Community Health Nursing (3)
Prerequisite: Graduate standing. Nursing assessment and analysis of community characteristics, including social, cultural and economic factors. Design of programs which meet the needs of particular ethnic groups and health aggregates for health promotion and disease prevention.

NURS 741. Integrated Women’s Health/Nurse-Midwifery Clinical Practicum (2 or 4 or 6)
Prerequisites: Nursing 637 and 638. Supervised laboratory and clinical experiences (off campus) providing obstetrical, intrapartum, newborn, gynecological, primary and well women care for adolescent and adult women throughout the lifespan in diverse clinical settings. Maximum credit six units.

NURS 742. Principles of Nurse-Midwifery II (3)
Prerequisites: Nursing 640. Concurrent registration in Nursing 743. Expands concepts and principles applied to management of pathophysiological and psychological issues complicating the child-bearing 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)
Prerequisites: Nursing 640. Concurrent registration in Nursing 742. Supervised laboratory and clinical experiences providing gynecological, well woman, primary, obstetric, postpartum and newborn care for adolescent and adult women throughout the lifespan in diverse clinical settings and in complex situations.

NURS 744. Women's Health/Nurse-Midwifery Assessment and Management III (3)
Prerequisites: Nursing 638. Concurrent registration in Nursing 745. Theoretical concepts and principles applied to management of pathophysiological and psychological issues in women’s healthcare. Contemporary issues in well women, gynecological, and primary care.

NURS 745. Women's Health/Nurse-Midwifery Clinical Practicum III (4-6)
Twelve to 18 hours per week in consultation with adviser. Prerequisite: Concurrent registration in Nursing 744. Clinical experiences in one or more of the following settings: gynecological, well women/family planning, primary care, obstetrics/ prenatal, intrapartum, post-partum, and newborn care.

NURS 751. Advanced Practice Nursing: Acute/Critical Care Theory and Technology (3)
Prerequisite: Consent of advanced practice nursing concentration chair. Role of advanced practice nurse in acute/critical care settings. Problems and interventions with acutely and critically ill adults and elderly. Emphasis on research-based interventions, psychosocial responses, standards of practice, expanding technologies, and continuation of care to the home.

NURS 753. Advanced Practice Nursing: Acute and Critical Care Practicum (3)
Nine hours of laboratory. Prerequisite: Concurrent registration in Nursing 751. Care management activities of acute and critical care advanced practice nurse: research-based care of select adult and elderly clients and families; consultation in coordination of client care; interdisciplinary collaboration; evaluation of care based on standards of practice. Maximum credit six units applicable to a master’s degree.

NURS 779. 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 797. Thesis (3) Cr/NC/RP
Prerequisite: Consent of instructor. Independent study. Maximum credit six units applicable to a master’s degree. For students using Plan B, Comprehensive Examination is limited to three units.

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

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

NURS 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program or 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

NURS 800. Biostatistics for Advanced Practice Nursing (3)
Prequisites: Admission to the DNP program and concurrent registration in Nursing 801.
Development of advanced competency in terminology, concepts, correct uses, and interpretation of biostatistics. Assessment of quality of observed data and collection methods. Utilization of biostatistics for research and evidence-based nursing practice with emphasis on intersection of biostatistics and epidemiology.

NURS 801. Translational Research and Evidence-Based Practice (3)
Prequisites: Admission to the DNP program and concurrent registration in Nursing 800.
Translate research into practice using research outcomes and planned change processes. Apply best practice evidence from systematic research to current health care situations. Utilize informational technology and analytical methods in development of best practices and evaluating care systems.

NURS 802. Advanced Systems Leadership (3)
Prequisites: Credit or concurrent registration in Nursing 800 and 801.
Knowledge of and ability to apply theories of governance, organizational development, change management, practice management, innovation, and quality management integrated with understanding of systems and interdisciplinary cooperative work in health care and education systems.

NURS 803. Epidemiology for Advanced Nursing Practice (3)
Prequisite: Nursing 800.
Development of competency in epidemiology to include application of epidemiologic methods, rates, levels of prevention, vital statistics, modes of transmission, models of causation. Nursing practice using case examples with analysis of data and treatment outcomes.

NURS 804. Proposals and Grant Development in Health Care (3)
Prequisites: Nursing 800 and 801.
Elements of successful grant proposals related to health care problems. Application of research criteria, evidence-based practice knowledge and best-practice strategies in the development of a proposal.

NURS 805. Seminar in Health Policy, Ethics, and Advocacy (3)
Prequisite: Admission to the DNP program.
Analysis of health policy. Ethical aspects of health policy and the link between health and health disparities. Role of nursing leadership and science to promote social justice.

NURS 806. Evidence-Based Practice DNP Project Synthesis (3)
Prequisites: Nursing 802, 803, 804, 805.
Evidence-based doctoral project leading to improved direct patient care or system to support direct care or education of care providers. Project is written and submitted to SDSU, host agency, and Institutional Review Board (IRB).

NURS 807. Evidence-Based Practice DNP Project Implementation (3) Cr/NC
Prequisites: Nursing 806, Public Health 627, and Institutional Review Board (IRB) approvals from SDSU and host agency.
Implementation phase of evidence-based doctoral project leading to improved direct patient care or system to support direct care or education of care providers. Project is implemented with representative of host agency.

NURS 808. Evidence-Based Practice DNP Project Dissemination (3) Cr/NC
Prequisites: Nursing 807, Public Health 627, and Institutional Review Board (IRB) approvals from SDSU and host agency.
Preparation for professional sharing of improvement outcomes through refereed publications and/or appropriate conferences.

NURS 809. Doctor of Nursing Practice (DNP) Residency (1-9) Cr/NC
Prequisites: Admission to the DNP program and consent of instructor.
Individualized residency experiences that expand clinical expertise and specialized knowledge in a direct care or systems focused advanced nursing practice specialty role. Maximum credit nine units.

NURS 810. Advanced Health Care Informatics and Knowledge Management (3)
Prequisites: Nursing 684 and 802
Organizational governance, analysis of systems and system requirements, design, and implementation of information systems in health care. Complexity and system theories as frameworks for decision making regarding information systems.
Nutritional Sciences

In the School of Exercise and Nutritional Sciences
In the College of Health and Human Services

OFFICE: Exercise and Nutritional Sciences 351
TELEPHONE: 619-594-5541
http://ens.sdsu.edu

Director of School: Fred W. Kolkhorst, Ph.D.

Faculty
Mark J. Kern, Ph.D., Professor of Exercise and Nutritional Sciences
Mee Young Hong, Ph.D., Associate Professor of Exercise and Nutritional Sciences
Shirin Hooshmand-Yazdi, Ph.D., Assistant Professor of Exercise and Nutritional Sciences

Associateships and Assistantships

Graduate teaching associateships are available for a limited number of qualified students. These provide essential education, technical training, and creative experience necessary for future professional and scholarly activity or college-level teaching. Graduate assistantships are also available in some cases to aid faculty research. Application blanks and additional information on graduate programs may be obtained from the School of Exercise and Nutritional Sciences Web site at http://ens.sdsu.edu.

General Information

The School of Exercise and Nutritional Sciences offers graduate study leading to the Master of Science degree in nutritional sciences and a concurrent graduate program leading to a Master of Science degree in nutritional science and M.S. degree in exercise physiology.

In order to be granted permission to enroll in coursework leading to completion of the didactic program in dietetics (accredited by the Commission on Accreditation for Dietetics Education), students admitted to the Master of Science degree program in nutritional sciences, 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, 212, 336; Chemistry 100, 130, 160; and a statistics course (e.g. Psychology 270).

Admission for 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
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 475 (old GRE score) or 151 (new GRE score) on the verbal and 475 (old GRE score) or 142 (new GRE score) on the quantitative sections of the GRE General Aptitude 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: 552933)

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 607, 608, 610; either Nutrition 600 or 700; and Exercise and Nutritional Sciences 601 and 602. Also, students complete their degree by choosing either Plan A or Plan B. In Plan A, all students will include Nutrition 799A (thesis) for completion of their degree, accompanied by final oral examination on the field of the thesis and on the implications of the thesis research for the broader field of nutritional sciences is also required. If students select Plan B, Exercise and Nutritional Sciences 601 and 602 (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 (old GRE score) or 151 (new GRE score) on the verbal and 475 (old GRE score) or 142 (new GRE score) on the quantitative sections of the GRE General Aptitude 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: 552990)

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.

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>DPT 750</td>
<td>Concepts in Physiology, Pathophysiology, and Pharmacology (4)</td>
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<tr>
<td>DPT 830</td>
<td>Cardiopulmonary Therapeutics (4)</td>
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<tr>
<td>ENS 601</td>
<td>Experimental Methods in Exercise and Nutritional Sciences (3)</td>
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<tr>
<td>ENS 602</td>
<td>Research Evaluation in Exercise and Nutritional Sciences (3)</td>
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<tr>
<td>ENS 661</td>
<td>Seminar in Advanced Physiology of Exercise (3)</td>
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<tr>
<td>ENS 662</td>
<td>Advanced Exercise Physiology Laboratory (3)</td>
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<tr>
<td>ENS 796</td>
<td>Exercise Specialist Internship (3) Cr/NC</td>
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<tr>
<td>NUTR 600</td>
<td>Seminar: Foods and Nutrition (3)</td>
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<tr>
<td>NUTR 607</td>
<td>Child Nutrition (3)</td>
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<td>NUTR 608</td>
<td>Geriatric Nutrition (3)</td>
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<td>NUTR 610</td>
<td>Nutrition and Energy (3)</td>
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<tr>
<td>NUTR 700</td>
<td>Seminar in Nutrition (3)</td>
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</table>

Plan A

- NUTR 799A Thesis (3) Cr/NC/RP
- OR
- ENS 799A Thesis (3) Cr/NC/RP

or Plan B

- ENS 790 Seminar in Directed Readings (3) Cr/NC

Electives: Seven units to be selected with approval of graduate adviser.

If a student, after entering the concurrent program leading to a Master of Science degree in nutritional sciences 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 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 and Associate Dean of the Division of Undergraduate Studies

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: Todd W. Anderson, Ph.D.
BIOL 515 Marine Invertebrate Biology (4)
BIOL 517 Marine Ecology (4)

Economics Course (ECON)
ECON 696 Experimental Topics (3)*

Civil Engineering Courses (CIV E)
CIV E 632 Computational Hydraulics and Hydrology (3)
CIV E 641 Advanced Foundation Engineering (3)

Geography Courses (GEOG)
Adviser: Douglas A. Stow, Ph.D.
GEOG 588 Intermediate Remote Sensing of Environment (4)
GEOG 670 Environmental Conservation Theory (3)
GEOG 770 Seminar in Environmental Conservation (3)

Geological Sciences Course (GEOL)
Adviser: Stephen A. Schellenberg, Ph.D.
GEOL 640 Geotectonics (3)

Public Health Courses (P H)
Adviser: Richard M. Gersberg, Ph.D.
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.
Faculty
Mark R. Wheeler, Ph.D., Associate Professor of Philosophy, Chair of Department
Peter C. Atterton, Ph.D., Professor of Philosophy
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
Steven L. Barbone, Ph.D., Associate Professor of Philosophy
(Graduate Adviser)
Sandra A. Wawrytko, Ph.D., Associate Professor of Philosophy

General Information
The Department of Philosophy offers a program of graduate studies leading to the Master of Arts degree. The purpose of the MA program in philosophy is to provide students with rigorous advanced training in philosophical reasoning on philosophical topics. The program serves students who wish to go on to pursue Ph.D. work in philosophy or other areas of advanced study; who seek skill development for professional careers such as teaching, law, business, and public service; and who seek personal enrichment through disciplined reflection on important and profound philosophical questions.

Note bene: Anyone applying to do graduate work in philosophy with the hope of eventually teaching philosophy needs to be aware that there are currently many more candidates for positions in teaching philosophy than there are positions available.

Admission to Graduate Study
All students must satisfy the general requirements for admission to the university with classified graduate standing as described in Part Two of the Graduate Bulletin. To be considered for admission to the graduate program in the Department of Philosophy with classified status, an applicant must fulfill the following requirements:
1. All students must hold a baccalaureate degree from an accredited U.S. institution or equivalent degree. The degree should be in the field of philosophy.
2. A minimum grade point average of 3.3 in upper division work in philosophy with an overall minimum grade point average of 3.0 is required.

Conditional admittance: Unusually promising students who do not meet all the above requirements may be accepted into the program with conditional status. Students who are accepted conditionally with 12-23 units of upper division philosophy will be required to take additional units (beyond the 30 units required for the M.A. degree) to meet the minimum qualification of having earned 24 units of upper division philosophy before achieving classified standing. Applicants who have an overall grade point average of 2.85-2.99 and an average of 3.3 in upper division philosophy may be considered for conditional admittance.

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

Graduate Admissions
The following materials should be submitted as a complete package directly to:
Graduate Admissions
Enrollment Services
San Diego State University
San Diego, CA 92182-7416
(1) Official transcripts (in sealed envelopes) from all postsecondary institutions attended;
Note:
• Students who attended SDSU need only submit transcripts for work completed since last attendance.
• Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.
(2) GRE scores (http://www.ets.org, SDSU institution code 4682);
(3) English language score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682).

Department of Philosophy
The following materials should be mailed or delivered to:
Department of Philosophy
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-6044
(1) A letter describing the applicant's reasons for pursuing graduate study in philosophy.
(2) A sample of the applicant's writing (about 2,000 words) that provides evidence of a capacity for careful analytic thought.
(3) Two letters of recommendation.
(4) An official report of a GRE score is required. The department has not set any minimum score to be achieved on the GRE, but the score along with all other materials will be taken into consideration in evaluating each application.

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy as stated in Part Four of the Graduate Bulletin.

In order to advance to candidacy in the philosophy M.A. program, every graduate student must demonstrate reading proficiency in a language other than English. Languages may include both the formal languages of logic and mathematics and natural languages other than English (as appropriate to one's studies in philosophy). Students shall consult with the graduate adviser to determine which language is appropriate. Proficiency in a language shall be demonstrated by earning a grade of B or more in either (a) no fewer than two lower division courses in that language or (b) at least one upper division course in that language. All grades must be earned either while the student is a graduate student in the philosophy department or at an accredited college within five years prior to admission to the graduate program in philosophy. Appropriate examinations may be given when available.

To be advanced to candidacy, a student must have achieved and maintain an overall grade point average of 3.3.
Specific Requirements for the Master of Arts Degree

(Major Code: 15091) (SIMS Code: 115301)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of the Graduate Bulletin, the student must complete a program of 30 units of graduate coursework (500-799) selected with the approval of the graduate adviser. Students must complete a minimum of 24 units from courses in philosophy. The 24 units shall include 799A and a minimum of 12 units in 600-level courses.

At the beginning of every fall semester, every new graduate student is expected to attend an orientation designed to familiarize students with the program and to help them to get to know the faculty and other students in the program.

All courses taken to satisfy the master's degree requirements must be taken for a letter grade when this option is available. Graduate students must maintain at least a 3.0 grade point average in graduate courses taken in the degree program and may not advance to candidacy with less than a 3.3 grade point average. Grades of C or higher for graduate courses are accepted for graduate credit. 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 being placed on academic probation for the following semester. Students who are still achieving a grade point average below 3.0 at the end of the probationary period are subject to immediate dismissal from the program.

To be eligible to enroll in Philosophy 799A, a student must be advanced to candidacy. Each student will arrange for a committee of no less than three tenured/tenure track SDSU faculty members (two of these necessarily must be from the Philosophy Department; one of the three must be from outside the Philosophy Department). One faculty member from the Philosophy Department will serve as the chair/director of the thesis.

Courses Acceptable on Master's Degree Program in Philosophy (PHIL)

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

UPPER DIVISION COURSES

PHIL 506. Twentieth Century Continental Philosophy (3)
Prerequisite: Six upper division units in philosophy. Major figures and movements in European philosophy from Husserl to the present.

PHIL 507. Twentieth Century Anglo-American Philosophy (3)
Prerequisite: Six upper division units in philosophy. Major movements, issues, or figures of twentieth century Anglo-American philosophy. Course may be repeated with new content. Maximum credit six units.

PHIL 508. Existentialism (3)
Prerequisite: Six units in philosophy. The philosophical aspects of existentialism. Major emphasis is on the diversity of thought within a common approach as this is shown in individual thinkers.

PHIL 510. Philosophy of Law (3)
Prerequisites: Three units from Philosophy 101 or 102; 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)
Prerequisite: Philosophy 101 or 102. 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 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. Limited to 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 696 and 698 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.
Physical Therapy
In the School of Exercise and Nutritional Sciences
In the College of Health and Human Services

OFFICE: Exercise and Nutritional Sciences 141
TELEPHONE: 619-594-0566 / FAX: 619-594-6553
E-MAIL: dpt@mail.sdsu.edu
http://ens.sdsu.edu

Director of School: Fred W. Kolkhorst, Ph.D.

Faculty
Mitchell J. Rauh, Ph.D., P.T., M.P.H., Professor of Exercise and Nutritional Sciences, Director of Physical Therapy Program
Michael J. Buono, Ph.D., Professor of Exercise and Nutritional Sciences
Laila Alibiglu, Ph.D., P.T., Assistant Professor of Exercise and Nutritional Sciences

Doctoral Program

General Information
The San Diego State University Doctor of Physical Therapy (DPT) program is designed to educate clinical practitioners prepared for autonomous practice in physical therapy, and to be experts in the examination, evaluation, and intervention of movement dysfunction. Attention to physical therapy services to all ages and diverse populations, the DPT program allows qualified students to prepare as primary care physical therapists capable of practicing autonomously in a variety of environments. Students will be prepared to continue special areas of study to qualify for certification as clinical specialty practitioners. This is in support of the professional commitment as physical therapists providing quality services to the citizens of California and the San Diego region.

Program objectives of the DPT:

- Produce graduates who generate and disseminate physical therapy practice knowledge to improve clinical outcomes and to stimulate the use of research in practice;
- Prepare graduates to evaluate and translate existing evidence as a foundation for a scientifically based advanced practice;
- Graduates who are able to use physical therapy knowledge and innovations in technology and practice to provide safe, effective, appropriate, and culturally sensitive and competent physical therapy practice;
- Leaders in collaborative interdisciplinary teams to influence changes in practice that ensures the delivery of a holistic approach to care;
- Graduates who are prepared to influence health care systems, lead policy initiatives, and clinical practice through dissemination of knowledge, skills, and leadership that will improve the physical health status and outcomes for populations, and advocate for changes that can transform how physical therapy practice is delivered;
- Increase the number of physical therapists who are prepared to implement advanced practice physical therapy roles according to national standards for advanced practice and/or executive leadership in healthcare organizations and/or independent practice;
- The Doctor of Physical Therapy (DPT) is a three-year program. The first two years are didactic instruction while the third year consists primarily of clinical experiences. The DPT is the entry-level degree.

Admission to the DPT Program

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 possess an undergraduate degree earned at an institution accredited by a regional accrediting association and the following:

- One year of laboratory and lecture-based human anatomy and physiology courses;
- One year of laboratory and lecture-based general inorganic chemistry;
- One year of laboratory and lecture-based college level physics;
- One year each of general and upper division biology that includes lecture and laboratory;
- One semester each of general psychology and upper division psychology (preferably child development or abnormal);
- One semester of statistics;
- One semester of English writing (English composition or an upper-division writing course);
- No more than two prerequisite courses can be taken during the spring semester (or quarter) prior to commencing the program. In addition, all prerequisite coursework must be completed with a GPA of at least 3.00.

Admission criteria for a preferred applicant to the SDSU DPT program will provide evidence of and demonstrate:

- A grade point average (GPA) commensurate with graduate school admission requirements;
- A recommended minimum 3.00 overall GPA with at least a 3.00 GPA in all upper division and any graduate courses combined;
- The applicant was in good standing at the last institution of higher education attended.

Additional evidence considered in the admission process shall include but not be limited to:

- Graduate Record Examination (GRE) with a minimum score of 1,000 (300 on new scale, verbal and quantitative combined) and a minimum score of 4.0 (analytical writing). Scores from the previous five years will be acceptable as valid;
- Three confidential letters of recommendation from professionals attesting to the ability, scholarship, and aptitude of the candidate for a rigorous full-time DPT program. At least one letter must be from a licensed physical therapist whom the applicant has had a professional association and can appropriately evaluate the applicant's potential as a student in the physical therapy program. One letter must be from a professor for a course which the applicant completed. The third letter must be from a licensed physical therapist or professor as described above;
- Demonstrated evidence of exposure to the field and an appreciation of the breadth, depth, and scope of practice. This can be accomplished through either volunteer or paid work experience in a physical therapy setting. A minimum of 100 observation hours must be completed under the supervision of a licensed physical therapist. Observation in two or more different types of physical therapy settings (e.g. pediatric and orthopedic, rather than two different orthopedic settings) is highly recommended;
- A written statement of purpose reflecting understanding of the challenges facing DPT practice and willingness to work with diverse clients in a variety of physical therapy settings;
- A written statement from the applicant outlining their professional goals and reasons for selecting physical therapy as a career.
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 Doctor of Physical Therapy 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);

**Doctor of Physical Therapy**

The following materials should be submitted by December 15 for admission for the fall semester to:

Doctor of Physical Therapy Program
(Attention: Program Director)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7251

1. DPT supplemental application form;
2. DPT prerequisite course checklist;
3. DPT applicant volunteer and work experience form;
4. Three letters of recommendation;
5. DPT program disclosure form;
6. Statement of professional goals;
7. Statement of contemporary issues in physical therapy;
8. Applicant’s resume.

**Advancement to Candidacy**

All students must (1) Meet the general requirements for advancement to candidacy as required by San Diego State University; and (2) Successfully complete all required courses and the comprehensive examination for the first two years of study constitute the qualifying process.

**Specific Requirements for the Doctor of Physical Therapy Degree**

(Major Code: 12122) (SIMS Code: 556529)

The Doctor of Physical Therapy (DPT) is a professional and not a research degree. Students in the program will be involved in evidence-based practice/translational research projects as part of coursework and clinical internship. Students are expected to complete the program in three years while attending full-time as there is no part-time program. The minimum number of units for the DPT program of study is 116 units and the maximum number of units allowed is 121 units.

**FALL SEMESTER I (17 Units)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>DPT 726</td>
<td>Clinical Anatomy II (4)</td>
</tr>
<tr>
<td>DPT 760</td>
<td>Neurosciences (4)</td>
</tr>
<tr>
<td>DPT 782</td>
<td>Therapeutic Exercise (4)</td>
</tr>
<tr>
<td>DPT 882</td>
<td>Seminar in Evidence-Based Practice II (2)</td>
</tr>
<tr>
<td>DPT 886</td>
<td>Functional Neuro-Biomechanical Relationships (3)</td>
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**SUMMER I (12 Units)**

<table>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>DPT 872</td>
<td>Health Care Economics in Physical Therapy Practice (2)</td>
</tr>
<tr>
<td>DPT 880</td>
<td>Differential Diagnosis in Physical Therapy (3)</td>
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<tr>
<td>DPT 887</td>
<td>Seminar in Professional Development (3) Cr/NC</td>
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**FALL SEMESTER II (18 Units)**

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>DPT 801</td>
<td>Clerkship (3) Cr/NC</td>
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<tr>
<td>DPT 897</td>
<td>Doctoral Research (1) Cr/NC</td>
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**SPRING SEMESTER I (17 Units)**

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>DPT 776</td>
<td>Clinical Anatomy II (4)</td>
</tr>
<tr>
<td>DPT 779</td>
<td>Clinical Anatomy I (4)</td>
</tr>
<tr>
<td>DPT 785</td>
<td>Concepts in Physiology, Pathophysiology, and Pharmacology (4)</td>
</tr>
<tr>
<td>DPT 780</td>
<td>Integumentary Therapeutics (4)</td>
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<tr>
<td>DPT 881</td>
<td>Seminar in Evidence-Based Practice I (2)</td>
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**SPRING SEMESTER II (15 Units)**

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>DPT 782</td>
<td>Musculoskeletal Therapeutics I (4)</td>
</tr>
<tr>
<td>DPT 783</td>
<td>Cardiopulmonary Therapeutics (4)</td>
</tr>
<tr>
<td>DPT 785</td>
<td>Neurophysiological Therapeutics I (4)</td>
</tr>
<tr>
<td>DPT 895</td>
<td>Seminar in Case Presentations (3)</td>
</tr>
<tr>
<td>DPT 897</td>
<td>Doctoral Research (1) Cr/NC</td>
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**SUMMER II (9 Units)**

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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>DPT 803</td>
<td>Life Cycle I (2)</td>
</tr>
<tr>
<td>DPT 821</td>
<td>Musculoskeletal Therapeutics II (3)</td>
</tr>
<tr>
<td>DPT 836</td>
<td>Neurophysiological Therapeutics II (3)</td>
</tr>
<tr>
<td>DPT 857</td>
<td>Prosthetics and Orthotics (2)</td>
</tr>
<tr>
<td>DPT 875</td>
<td>Medical Therapeutics in Physical Therapy Practice (2)</td>
</tr>
<tr>
<td>DPT 878</td>
<td>Psychosocial Aspects of Rehabilitation (2)</td>
</tr>
<tr>
<td>DPT 897</td>
<td>Doctoral Research (1) Cr/NC</td>
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**FALL III SEMESTER (14 Units)**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>DPT 889</td>
<td>Doctoral Project (4) Cr/NC</td>
</tr>
<tr>
<td>DPT 895</td>
<td>Clinical Internship (10) Cr/NC</td>
</tr>
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**SPRING III SEMESTER (14 Units)**

<table>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>DPT 889</td>
<td>Doctoral Project (4) Cr/NC</td>
</tr>
<tr>
<td>DPT 895</td>
<td>Clinical Internship (10) Cr/NC</td>
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</tbody>
</table>

**Courses Acceptable on DPT Degree Program in the School of Exercise and Nutritional Sciences (DPT)**

Refer to Courses and Curricula 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**

DPT 710. Foundations of Physical Therapy Evaluation (3)
One lecture and six hours of laboratory.
Prerequisite: Admission to the DPT program.
Problem solving and psychomotor skills to perform general physical examination. Concepts, procedures, and techniques required to provide safe and effective patient care.

DPT 725. Clinical Anatomy I (4)
(Same course as Biology 725)
Three lectures and three hours of laboratory.
Prerequisite: Admission to the DPT program.
Applied anatomy of upper and lower extremities of the human body; joint anatomy and mechanics, anatomical structures to produce articular movement to include muscles, arterial, peripheral nervous systems, and articular and extremity movement patterns.

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Physical Therapy

DPT 726. Clinical Anatomy II (4)
(Same course as Biology 726)
Three lectures and three hours of laboratory.
Prerequisite: Doctor of Physical Therapy/Biology 725.
Axial portion of the human body; biomechanics of the spinal column to include head and neck, thorax, related viscera, and abdomino-pelvic region.

DPT 750. Concepts in Physiology, Pathophysiology, and Pharmacology (4)
Prerequisite: Admission to the DPT program.
Normal physiology, diseases, disorders, and injuries. Pathological processes, specific organ system pathology, multisystem pathology, and pharmacological concepts.

DPT 760. Neurosciences (4)
Prerequisites: Doctor of Physical Therapy 725 and 750.
Anatomy and physiology of central nervous system; substrates and processes of movement.

DPT 780. Integumentary Therapeutics (4)
Two lectures and six hours of laboratory.
Prerequisite: Admission to the DPT program. Anatomy, physiology, pathology, mutability of human biological tissues in the rehabilitation process.

DPT 782. Therapeutic Exercise (4)
Two lectures and six hours of laboratory.
Prerequisites: Doctor of Physical Therapy 710, 725, 750, 780, 881.
Therapeutic exercise as it applies to clinical practice of physical therapy.

DOCTORAL COURSES

DPT 801. Clerkship (3) Cr/NC
Prerequisites: Successful completion of all coursework up to Doctor of Physical Therapy 801, Clerkship.
Cognitive, psychomotor, and affective skills of physical therapy practice in a clinical setting.

DPT 802. Life Cycle I (2)
Prerequisite: Doctor of Physical Therapy 801.
Normal and delayed maturation processes from conception through adulthood; nervous, cardiovascular, and musculoskeletal systems.

DPT 803. Life Cycle II (2)
Prerequisite: Doctor of Physical Therapy 802.
Age-related changes from young adulthood to senescence; analysis of resultant functional limitations.

DPT 820. Musculoskeletal Therapeutics I (4)
Two lectures and six hours of laboratory.
Prerequisite: Doctor of Physical Therapy 801.
Examination, diagnosis, and management of lower and upper extremities, and spinal musculoskeletal disorders.

DPT 821. Musculoskeletal Therapeutics II (3)
Two lectures and three hours of laboratory.
Prerequisite: Doctor of Physical Therapy 820.
Clinical principles and concepts for management of orthopedic, sports, and industrial injuries.

DPT 822. Interventions in Musculoskeletal Therapeutics (3)
Two lectures and three hours of laboratory.
Prerequisite: Doctor of Physical Therapy 821.
Analysis of interventions used to treat clients with dysfunctions of the musculoskeletal system.

DPT 830. Cardiopulmonary Therapeutics (4)
Three lectures and three hours of laboratory.
Prerequisite: Doctor of Physical Therapy 801.
Electrocardiography, exercise testing, and exercise prescription for patient populations suffering from acute or chronic illness.

DPT 835. Neurophysiological Therapeutics I (4)
Three lectures and three hours of laboratory.
Prerequisite: Doctor of Physical Therapy 801.
Neurological deficits in adults and children secondary to upper motor-neuron dysfunction.

DPT 836. Neurophysiological Therapeutics II (3)
Two lectures and three hours of laboratory.
Prerequisite: Doctor of Physical Therapy 835.
Scientific theory pertaining to composite impairments of neurologic patients, with application of motor-control theory to neuromuscular system.

DPT 837. Interventions in Neuromuscular Therapeutics (3)
One lecture and six hours of laboratory.
Prerequisite: Doctor of Physical Therapy 836.
Interventions used to treat clients with dysfunctions of the neuromuscular system.

DPT 857. Prosthetics and Orthotics (2)
Prerequisite: Doctor of Physical Therapy 820.
Design, fabrication, and fitting of orthotic and prosthetic devices.

DPT 868. Physical Therapy Organization and Administration (2)
Prerequisite: Doctor of Physical Therapy 801.
Designing, equipping, and staffing a physical therapy department and office. Budget development, cost accounting, supervisory functions, evaluation techniques, methods of quality assurance. Business strategies and skills for private practice setting.

DPT 872. Health Care Economics in Physical Therapy Practice (2)
Prerequisite: Admission to the DPT program.
Local, national, international economic, and political pressures on delivery of physical therapy services.

DPT 875. Medical Therapeutics in Physical Therapy Practice (2)
One lecture and three hours of laboratory.
Prerequisite: Doctor of Physical Therapy 830.
Contemporary medical interventions for physical therapy practice.

DPT 878. Psychosocial Aspects of Rehabilitation (2)
Prerequisite: Admission to the DPT program.
Adjustment to physical disability and terminal illness; ethical decision-making.

DPT 880. Differential Diagnosis in Physical Therapy (3)
Prerequisites: Doctor of Physical Therapy 710, 725, 750.
Musculoskeletal conditions, medical pathological problems, and/or co-morbidities affecting clinical decision-making.

DPT 881. Seminar in Evidence-Based Practice I (2)
Prerequisite: Admission to the DPT program.
Preparation as a consumer of the professional literature in physical therapy.

DPT 882. Seminar in Evidence-Based Practice II (2)
Prerequisite: Doctor of Physical Therapy 881.
Use of evidence in current physical therapy practice.

DPT 884. Seminar in Abnormal Human Gait (2) Cr/NC
Prerequisite: Admission to the DPT program.
Gait analyses and gait-related physical therapy examination and intervention planning with a variety of patient populations.

DPT 885. Seminar in Case Presentations (3)
Prerequisite: Doctor of Physical Therapy 801.
Patient case and analysis of evidence from clinical interactions between student and client.

DPT 886. Functional Neuro-Biomechanical Relationships (3)
Prerequisite: Admission to the DPT program.
Structures of the musculoskeletal system and individual functional regions. Forces sustained in normal and pathological conditions.

DPT 887. Seminar in Professional Development (3) Cr/NC
Prerequisite: Admission to the DPT program.
Professional physical therapy at individual and societal levels.

DPT 889. Doctoral Project (4-4) Cr/NC
Prerequisites: Admission to the DPT program and completion of all prior DPT coursework.
Final paper or project on an in-depth clinical or research problem related to the physical therapy profession, presented to a professional audience.

DPT 890. Doctoral Project (10) Cr/NC
Prerequisite: Successful completion of all DPT coursework. Clinical internship in physical therapy.

DPT 897. Doctoral Research (1) Cr/NC
Prerequisite: Admission to the DPT program.
Investigation to the general field of the doctoral project.
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
Calvin W. Johnson, Ph.D., Professor of Physics
Patrick J. Papin, Ph.D., Professor of Physics and Associate Dean for Academic Affairs of the College of Sciences
Alan R. Sweedler, Ph.D., Professor of Physics, Director of Center for Energy Studies, and Assistant Vice President for International Programs
Milton S. Torikachvili, Ph.D., Professor of Physics
Fridolin Weber, Ph.D., Professor of Physics (Graduate Adviser)
Matthew E. Anderson, Ph.D., Associate Professor of Physics
Arlette R.C. Baljon, Ph.D., Associate Professor of Physics

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 medical 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.

The Master of Science degree in medical 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 Medical Physics

The following materials should be mailed or delivered to:
Department of Physics
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1233

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

(2) Application for teaching associate position or graduate assistantship (if desired).

Master of Arts Degree and Master of Science Degree in Physics

Admission to the Degree Curriculum
All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. In addition, the undergraduate preparation in physics must have substantially satisfied the undergraduate requirements for the bachelor's degree in physics. (Refer to the General Catalog for a description of these majors.) If the student's undergraduate preparation is deficient, he/she will be required to take courses for the removal of the deficiency. These courses are in addition to the minimum of 30 units for the master's degree.
Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy, as stated in Part Four of this bulletin, and satisfactory completion of Physics 604, 606, 608, and 610A.

Specific Requirements for the Master of Arts Degree in Physics
(Major Code: 19021) (SIMS Code: 777702)
In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Four of this bulletin. The student's graduate program must include Physics 604, 606, 608, and 610A. Eighteen additional units of 500-, 600- or 700-numbered electives must be selected with the approval of the Physics department graduate adviser. The Master of Arts degree in physics requires the completion of Plan B, a comprehensive written examination.

Specific Requirements for the Master of Science Degree in Physics
(Major Code: 19021) (SIMS Code: 777701)
In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Four of this bulletin.
The student must complete a graduate program to include Physics 604, 606, 608, 610A, 797 (3 units) and 799A. Twelve additional units of 500-, 600- or 700-numbered electives must be selected with the approval of the Physics department graduate adviser. The student is required to pass a final oral examination on the thesis.

Master of Science Degree in Medical 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 Medical 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, 565, 567. 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 538. Polymer Science (3)
(Same course as Chemistry 538)
Prerequisites: Chemistry 200 or 202; and Chemistry 410B or Physics 360 or Mechanical Engineering 350.
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)
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)
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 565. Radiobiology and Radiation Safety (3)
Prerequisites: Credit or concurrent registration in Physics 560 and consent of instructor.
Effects of ionizing radiation on physical and biological systems in medical imaging and radiation therapy. Associated radiation safety precautions.

PHYS 567. Nuclear Medicine Phthisis (3)
Prerequisite: Physics 560.
Physical principles of nuclear medicine and operating principles of nuclear medicine instrumentation. Radionuclide production, dose calibrators, well counters, gamma cameras, SPECT, PET, image quality, tomographic reconstruction, and image processing.

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.

SDSU GRADUATE BULLETIN 2013-2014
PHYS 596. Special Topics in Physics (1-4)
Prerequisite: Consent of instructor.
Selected topics in classical and modern physics. May be repeated with the consent of the instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

PHYS 600. Seminar (1-3)
Prerequisite: Consent of instructor.
An intensive study in advanced physics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

PHYS 604. Electromagnetic Theory (3)
Prerequisite: Physics 400B.
Electrostatics, magnetic induction, and magnetostatics, Maxwell’s equations, electromagnetic waves and radiation, fields in macroscopic media, special relativity. (Formerly numbered Physics 604A.)

PHYS 606. Statistical Mechanics (3)
Prerequisites: Physics 360, 410, 608.

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. Quantum Mechanics (3-3)
Prerequisite: Physics 410.
Physical and mathematical basis of quantum mechanics. Wave mechanics and the Schroedinger Equation, matrices and Hilbert space, angular momentum and spin, atomic structure, bound-state perturbation theory, many particle systems, transition rates and time-dependent perturbation theory, scattering, and relativistic quantum mechanics.

PHYS 670A-670B. Medical Physics (3-3)
Prerequisites: Physics 560 and 561.
Radiological physics, dosimetry, imaging, and radiation protection in medical environments including diagnostic radiology, nuclear medicine, and radiation oncology.

PHYS 672A. Radiation Therapy Physics Laboratory (3)
One lecture and six hours of laboratory.
Prerequisite: Physics 670A.
Skills to perform radiation therapy physics procedures.

PHYS 672B. Diagnostic Imaging Laboratory (3)
One lecture and six hours of laboratory.
Prerequisite: Physics 670B.
Skills to perform quality assurance and acceptance testing on radiological equipment in a clinical setting.

PHYS 680. Magnetic Resonance Imaging (3)
Prerequisites: Physics 670B or Mathematics 342A and Physics 354.
Nuclear magnetic resonance, relaxation theory, Fourier transform MR imaging physics, imaging sequences, optimization of signal and contrast, special imaging sequences to include MR angiography, functional MRI, diffusion and perfusion MRI, MR hardware and configuration.

PHYS 690. Medical Imaging Processing (3)
Two lectures and three hours of laboratory.
Prerequisite: Physics 670B.
Digital image processing to include medical image formats, image enhancement, restoration, registration, segmentation, representation, and programming.

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

PHYS 797. Research (1-3) Cr/NC/RP
Prerequisite: Consent of graduate adviser.
Research in one of the fields of physics. Maximum credit six units applicable to a master’s degree.

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

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

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

PHYS 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program courses.
Registration required of students whose only requirement is completion of the comprehensive examination for the master’s degree. Registration in 799C limited to two semesters.
Political Science
In the College of Arts and Letters

OFFICE: Adams Humanities 4142
TELEPHONE: 619-594-6244 / FAX: 619-594-7302

Faculty
Madhavi M. McCall, Ph.D., Professor of Political Science, Chair of Department
Brian E. Adams, Ph.D., Professor of Political Science
Mikhail A. Alexseev, Ph.D., Professor of Political Science
David V. Carruthers, Ph.D., Professor of Political Science
Lei Guang, Ph.D., Professor of Political Science
Dipak K. Gupta, Ph.D., Distinguished Professor of Political Science, Emeritus
Edward V. Heck, Ph.D., Professor of Political Science, Emeritus
Ronald F. King, Ph.D., Professor of Political Science
Farid Abdel-Nour, Ph.D., Associate Professor of Political Science
Adam Branch, 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
Ahmet T. Kuru, Ph.D., Associate Professor of Political Science
Kristen Hill Maher, Ph.D., Associate Professor of Political Science
Emanuelle G. Saccarelli, Ph.D., Associate Professor of Political Science
Ronnee D. Schreiber, Ph.D., Associate Professor of Political Science
Latha Varadarajan, Ph.D., Associate Professor of Political Science
(Graduate Adviser)
Madeline Baer, Ph.D., Assistant Professor of Political Science

General Information
The political science graduate program emphasizes global diversity and the interdependence between American society and politics and other nations through its curriculum in the areas of international relations, comparative politics, American politics, and political theory and methods. The department offers courses that contribute to career development in various professions including teaching, research, and consulting. Students from nations throughout the world, students in other disciplines and majors, and students from diverse social and cultural backgrounds enroll in political science graduate courses.

This graduate program provides core courses and programs of study for three distinctive groups of students: (1) Academic career students intending to enter Ph.D. programs and to pursue careers as university or college faculty or as professional researchers. (2) Community career students pursuing a master’s degree to obtain or enhance current employment including teaching, work in public agencies, business, military, law enforcement, and holding elected or appointed office. (3) Self-development students, often mature adults, pursuing a master’s degree because they enjoy studying political science and politics. These students contribute breadth and sophistication of understanding and a wealth of diverse experience to graduate seminars.

Because of the diversity of student interests, the department offers three specializations in the M. A. program. The general political science specialization provides the fundamental theoretical and analytical skills for students seeking to expand their knowledge of politics as well as those intending to pursue doctoral degrees in political science or placement in an academic setting. The specialization in public policy prepares students for further advanced study in that field and provides the skills necessary for placement in careers in both the public and private sectors. It covers such areas of American public policy as immigration policy, urban policy, environmental policy, or civil rights. 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 prepares 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 associateships.

Admission to Graduate Study
All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. In addition, students seeking the Master of Arts degree in political science must attain a satisfactory score on the GRE General Test (minimum of 153 on the verbal portion of the test and a minimum of 144 on the quantitative portion). 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 should 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 March 1.

Students applying for admission should electronically submit the university application available at http://www.csmentor.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):
Department of Political Science

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

Department of Political Science
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4427

(1) Two letters of reference;
(2) Personal statement.

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy as stated in Part Four of this bulletin. In addition, students must complete the Empirical Theory and Methods sequence by fulfilling one of the following options:

1. POL S 515 and 516.
2. POL S 515. Pass an examination in statistics at the graduate level.
3. POL S 515. Pass a course in statistics equivalent to POL S 516.
4. POL S 515. Pass an examination in a language other than one's native language and other than English at a level approved by the department.

Specific Requirements for the Master of Arts Degree

(Major Code: 22071) (SIMS Code: 115501)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the student will complete a program of study of 30 units of upper division and graduate courses as approved by the departmental graduate adviser. The program must include a minimum of 24 units in political science selected from courses listed below as acceptable on master’s degree programs. Political Science 515 and 516 and at least 18 units in 600- and 700-numbered courses, including Political Science 601, are required. Students who have previously completed Political Science 515 or 516, or the equivalent as determined by the graduate adviser, will enroll in such additional courses in political science as approved by the graduate adviser.

Students may choose either Plan A or Plan B as the culminating experience for the degree. Plan A requires the writing of a thesis and enrollment in Political Science 799A. Thesis. Plan B requires the completion of a comprehensive written and oral examination. In consultation with the graduate adviser, a student electing the Plan B option will form an examining committee consisting of a chairperson and two additional members from the political science faculty. The examination committee will prepare, administer, and grade the written examination testing the student’s general knowledge in the program of study. The oral portion of the examination will follow the committee’s review of the written examination.

Specific requirements for students selecting the general political science specialization (SIMS Code: 115501) are:

1. POL S 515 Research Design and Analysis in Political Science (3)
2. POL S 601 Seminar in the Scope and Methods of Political Science (3)
3. Four graduate seminars chosen from among the following:
   - POL S 603 Seminar in Theory and Method of Public Policy Analysis (3)
   - POL S 605 Seminar in Political Theory (3)
   - POL S 620 Seminar in American National Government (3)
   - POL S 625 Seminar in Political Behavior (3)
   - POL S 630 Seminar in Politics (3)
   - POL S 635 Seminar in Politics of Public Policy (3)

Specific requirements for students selecting the international relations/comparative politics specialization (SIMS Code: 115551) are:

1. POL S 515 Research Design and Analysis in Political Science (3)
2. POL S 601 Seminar in the Scope and Method of Political Science (3)
3. POL S 651 Seminar in Migration and Border Politics (3)
4. POL S 655 Seminar in General Comparative Political Systems (3)
5. POL S 658 Seminar in Post-Communist Political Systems (3)
6. POL S 661 Seminar in the Political Systems of the Developing Nations (3)
7. POL S 667 Seminar in Latin American Political Systems (3)
8. POL S 675 Seminar in International Relations (3)
9. 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 (SIMS Code: 115560) are:

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 603 Seminar in Theory and Method of Public Policy Analysis (3)
4. POL S 796 Internship in Public Policy (3)
5. Two graduate seminars chosen from among the following:
   - POL S 620 Seminar in American National Government (3)
   - POL S 625 Seminar in Political Behavior (3)
   - POL S 630 Seminar in Politics (3)
   - POL S 635 Seminar in Politics of Public Policy (3)
   - POL S 651 Seminar in Migration and Border Politics (3)
   - POL S 655 Seminar in General Comparative Political Systems (3)
6. POL S 696 Seminar in Selected Topics in Political Science (3), with permission of the graduate adviser.

6. Plan A: Political Science 799A, Thesis, and six additional units of coursework at the 500-level or above that may include transfer courses or courses outside the department, with permission of the graduate adviser.

OR

7. Plan B: Comprehensive written and oral examination. One additional seminar chosen from those listed in item 5 above and six additional units coursework at the 500-level or above that may include transfer units or courses outside of the department, with permission of the graduate adviser.

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3. POL S 665 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 696 Seminar in Selected Topics in Political Science (3), with permission of the graduate adviser.
6. Plan A: Political Science 799A, Thesis, and six additional units of coursework at the 500-level or above that may include transfer courses or courses outside the department, with permission of the graduate adviser.

OR

7. Plan B: Comprehensive written and oral examination. One additional seminar chosen from those listed in item 5 above and six additional units coursework at the 500-level or above that may include transfer units or courses outside of the department, with permission of the graduate adviser.

Courses Acceptable on Master's Degree Program in Political Science (POL S)

Field I: Political Theory

UPPER DIVISION COURSES

POL S 507. Marx and Marxism (3)
Prerequisite: Three units in political theory.
Marxism as an important tradition in political theory and with its history as a political movement. Theoretical and political debates in development of Marxism.

POL S 510. Contemporary Political Thought (3)
Prerequisite: Political Science 301B or 302 or 305 or 406.
Contemporary political questions and theoretical attempts to address them. Debates about justice, citizenship, and multiculturalism; as well as controversies over nature and scope of politics.

Field II: American Politics

UPPER DIVISION COURSES

POL S 530. Political Parties (3)
Prerequisite: Political Science 102 or 320.
The political party as a part of the process of government; party organization and activities; nominating and campaign methods; theories and functions of the party system; party responsibility. The functioning of political parties in the American political system. May include a substantial amount of material about foreign political systems.

POL S 531. Interest Groups and Political Movements (3)
Prerequisite: Political Science 101 or 102.
Pressure group activity, lobbies, mass movements; factors which explain origins and motivations of group behavior; votes, money, information, protest as political resources; theories of pluralism, power elite and mass society, class and ethnic politics. May include a substantial amount of material about foreign political systems.

POL S 533. Democracy in America (3)
Prerequisite: Political Science 102 or 320.
Quality and quantity of democratic experience in contemporary America. Construction of American regime, arrangement of power within that regime, expansion and contraction of citizen participation, and principles that Americans generally espouse.

POL S 535. Gender and Politics (3)
Prerequisites: Political Science 101 and 102.
How gender matters in understanding key political science concepts including democracy, public/private participation and representation. Women involved in political institutions as elected officials, activists, and policy makers from U.S. and comparative perspectives.

POL S 541. Special Problems in Public Law (3)
Prerequisite: Three units selected from Political Science 346, 347A, 347B, or 348.
Issues of contemporary relevance in field of public law, examining legal, moral, and political implications.

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. Political Ecology of Latin America (3)
Prerequisite: Upper division or graduate standing.
Ecology and politics of Latin America and the Caribbean. Environmental politics with related policy challenges of economic growth, equity, and social justice.

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.

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 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 596, 496, 596 courses applicable to a bachelor’s degree.
Maximum credit of six units of 596. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

POL S 601. Seminar in the Scope and Methods of Political Science (3)
The discipline of political science and systematic training in its methodology. Required of all applicants for advanced degrees in political science.

POL S 603. Seminar in Theory and Method of Public Policy Analysis (3)
Prerequisites: Political Science 601 and admission to the specialization in public policy.
Theoretical approaches used to explain and evaluate public policy performance. Focus on quantitative and qualitative methods of appraising the validity of theories.

POL S 605. Seminar in Political Theory (3)
Maximum credit six units applicable to a master’s degree.

POL S 615. Seminar in Research Design and Analysis in Political Science (3)
Prerequisite: Graduate Standing
Modeling and design of research projects. Theoretical understanding and logic of social science analysis. Hypothesis specification. Data collection, measurement, testing. (Formerly numbered Political Science 515.)

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)
Prerequisite: Graduate standing.
Selected topics in political science. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

POL S 795. Problem Analysis (3)
Analytical treatment of selected problems in political science.
Review of methods for investigation and reporting of data. Consideration of problems in preparation of project or thesis.

POL S 796. Internship in Public Policy (3)
Prerequisites: Political Science 601, 603, and eighteen units on official program for M.A. degree in political science with a specialization in public policy.
A 160-hour internship approved by instructor in public or private agency. Grade based on instructor’s evaluation of supervisor’s report, student consultation with instructor reviewing experience and required readings, and extensive paper relating internship experience to theories of public policy.

POL S 797. Research in Political Science (3) Cr/NC/RP
Prerequisite: Consent of the department chair.
Research in political theory, political parties, comparative government, international relations, public law or American government.

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

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

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

POL S 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program courses.
Registration required of students whose only requirement is completion of the comprehensive examination for the master’s degree. Registration in 799C limited to two semesters.
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
Linda C. Gallo, Ph.D., Professor of Psychology
Richard G. Graf, Ph.D., Professor of Psychology
Kate Hattrup, Ph.D., Professor of Psychology
Elliott Hirshman, Ph.D., Professor of Psychology and University President
Elizabeth A. Klonoff, Ph.D., Professor of Psychology, Co-Director of Clinical Training and of Doctoral Program
Vanessa L. Malcarne, Ph.D., Professor of Psychology
Nancy A. Marlin, Ph.D., Professor of Psychology and University Provost
Sarah N. Mattson Weller, Ph.D., Professor of Psychology
Robert F. McGivern, Ph.D., Professor of Psychology
Ralph-Axel Mueller, Ph.D., Professor of Psychology
Claire Murphy, Ph.D., Professor of Psychology
Joseph M. Price, Ph.D., Professor of Psychology
Radmilj Prislin, Ph.D., Professor of Psychology and Associate Dean of the Division of Graduate Affairs
Stephen K. Reed, Ph.D., Professor of Psychology
Edward P. Riley, Ph.D., Distinguished Professor of Psychology
Scott C. Roesch, Ph.D., Professor of Psychology
Thomas R. Scott, Ph.D., Professor of Psychology
Jennifer D. Thomas, Ph.D., Professor of Psychology (Graduate Adviser)
Jean M. Twenge, Ph.D., Professor of Psychology
Jeffrey M. Conte, Ph.D., Associate Professor of Psychology
Thierry Devos, Ph.D., Associate Professor of Psychology
Mark G. Ehrhart, Ph.D., Associate Professor of Psychology (Graduate Adviser)
Margaret Friend, Ph.D., Associate Professor of Psychology
Paul E. Gilbert, 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. Brassier, 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 department 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.

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

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

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

2) GRE scores (http://www.ets.org. SDSU institution code 4682);
(3) English language or IELTS score, if the language of instruction was not English (for English language see: http://www.ets.org; for IELTS see http://www.ielts.org; SDSU institution code 4682).

Department of Psychology

Students applying to both the SDSU/UCSD joint doctoral program and the SDSU master’s degree program are required to file only one university application and pay only one fee, which covers both programs. However, separate departmental applications, one for the master’s program and one for the doctoral program, must be filed if the student wishes to be considered for both programs.

Master of Arts Degree in Psychology

Master of Science Degree in Psychology

For application information, please consult the program Web site: http://www.psychology.sdsu.edu/admisReg.html. All application materials are submitted electronically and include the following:

1. Departmental application;
2. Statement of purpose;
3. Completed application for an assistantship (if applicant is interested in this type of financial support);
4. Three letters of recommendation from persons familiar with the applicant's academic performance.

Ph.D. Degree in Clinical Psychology

For application information, please consult the program Web site: http://clinpsyc.sdsu.edu. All application materials are submitted electronically.

Section I.
Master's Degree Programs

Admission to the Degree Curriculum

Admission to the Department of Psychology master’s program involves a two-step process. Applicants must file one application with the university, and a separate application package with the Department of Psychology.

To be considered for admission to the Department of Psychology programs, applicants must satisfy particular department requirements. These requirements and instructions for completing the department application package are shown below. The department application form is available at http://www.psychology.sdsu.edu. Students are admitted to the master’s programs in the fall semester only.

To qualify for admission to the master’s programs in psychology, the student must have:

1. For the M.A. program: An undergraduate major in psychology (or coursework equivalent to the SDSU bachelor’s degree) consisting of at least 24 upper division units with a grade point average of at least 3.0. The major must include classes in general psychology, physiological psychology, statistical methods, psychological testing and measurement, and at least one laboratory course or the equivalent in psychology. In addition, the student must have completed three of the following classes: developmental psychology, introduction to research methods, research methods, psychological 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 course providing research experience in psychology. In addition, the student must have completed 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 Test in Psychology is optional but highly recommended for 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 610, 670A-670B or 770A-770B, two units of 600, one unit of 797, and 799A. Students must also complete Psychology 561 or 760; two courses selected from Psychology 587, 632, 740, 751; and two elective courses. In special cases, and by petition to the department's graduate committee, students may take up to six units of the required 30 units in 500-level and above courses in other departments.

All new Master of Arts degree students are required to take two units of Psychology 600 during their first year.

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, 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 38 units in psychology to include Psychology 770A-770B, 801, 820, 840, 849, 850, 855, 856, 860 (or UCSD Clinical Psychology 205 [Neuroanatomy] or UCSD Clinical Psychology 227A [Mind, Brain, and Behavior I]), 896, and UCSD Clinical Psychology 202E (Psychopathology) or UCSD Clinical Psychology 227B (Mind, Brain, and Behavior II). Completion of the second year project and approval by a committee consisting of a minimum of three faculty members representing both SDSU and UCSD. For this degree only, all approvals and advancement to candidacy will be completed by the program director of the joint doctoral program.

Section II.
Doctoral Program

http://www.psychology.sdsu.edu/doctoral

Admission to the Degree Curriculum

To be considered for admission to the joint SDSU-UCSD doctoral program in clinical psychology, students must meet the general requirements for admission to both universities with classified graduate standing as outlined in the respective current catalogs. These include (a) an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or equivalent academic preparation, as determined by the graduate deans of the two institutions; (b) a minimum overall grade point average of 3.0; (c) a grade point average of at least 3.25 in the last 60 semester (90 quarter) units attempted; (d) good standing at the last institution attended; and (e) a minimum score of 550 verbal and 550 quantitative on the GRE Aptitude Test and a score above the 71st percentile on the GRE Advanced Test in Psychology. However, given the large number of applicants in the field of clinical psychology, the selection process is designed to identify the best from among highly qualified applicants. Thus no minimum set of qualifications in any way guarantees admission. Personal interviews will be conducted with the most promising applicants. Admission of any candidate who deviates from the minimum standards can only be granted with special permission of both graduate deans. No faculty member has authority to make an offer of a position in the program to any applicant, implied or otherwise, without final recommendation of the program directors and approval of the graduate deans.

Although an undergraduate psychology major is not mandatory for admission, applicants should have completed a minimum of 18 semester units (27 quarter units) in psychology including courses in physiological psychology, statistical methods, psychological testing, abnormal psychology, personality, social psychology, and an experimental laboratory in psychology. Advanced courses in perception and learning are desirable as are courses in biology, mathematics, linguistics, and other related areas (e.g., medical physics, computer sciences). The joint doctoral program is a year around program.

An option for Ph.D. students in clinical psychology is to concurrently pursue the Master of Public Health (MPH) degree in the Graduate School of Public Health. Students jointly enrolled will first be accepted into the psychology program and then be recommended by the psychology program for admission to the MPH program. Students may be recommended at any time prior to receiving their doctoral degree. Following acceptance into the MPH degree, students must complete all required core classes as well as requirements for the concentration in health promotion. A specially designed program of study that incorporates requirements from both degree programs has been developed. Subsequent to coursework, MPH candidates are required to complete a comprehensive examination in their area of study. (For more information, see the section of this bulletin under "Public Health.")

Students will be admitted to graduate programs in psychology only in the fall semester. All application material for the Ph.D. program must be received by the doctoral program office and the SDSU Office of Graduate Admissions not later than December 1. Because the research and clinical requirements of the program may involve work with vulnerable populations, all incoming students will complete a background check prior to initial matriculation.

Detailed instructions for applying to the program, along with all necessary forms, are located on the SDSU/UCSD Joint Doctoral Program in Clinical Psychology Web page, which can be found at http://clinpsyc.sdsu.edu. Please review and follow these instructions carefully. Specific questions not answered by these materials should be e-mailed to PsyD-IDP@email.sdsu.edu.
Specific Degree Requirements for the Doctor of Philosophy Degree in Clinical Psychology
(Major Code: 20031) (SIMS Code: 778310)

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, conduct, and multicultural issues in an increasingly diverse society; knowledge of the theory and techniques of psychological assessment; therapeutic interventions, acquisition of therapeutic skills; 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, 801, 820, 840, 849, 850, 855, 856, 860 (or UCSD Clinical Psychology 205 [Neuroanatomy] or UCSD Clinical Psychology 227A [Mind, Brain, and Behavior I]), 875 (or 775), 896, 897, and UCSD Clinical Psychology 202E [Psychopathology]) or UCSD Clinical Psychology 227B [Mind, Brain, and Behavior II]). Students also must take a course in cognitive/affective bases of behavior. This is typically taken at UCSD.

During the second year, students 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 in clinical psychology 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.

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 853 (Seminar in Developmental Psychopathology) and Psychology 852 (Seminar in Experimental Psychopathology Research), typically in the third year. Students in neuropsychology are required to take 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. While on internship, students must remain registered in Psychology 894, (Clinical Internship) and Psychology 899 (Doctoral Dissertation).

Students are expected to maintain the highest standards of academic performance with a minimum 3.0 grade point average. According to doctoral program policy, falling below a 3.0 GPA automatically places the student on academic probation. The 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 the student's overall GPA.

In clinical psychology, adherence to the Ethical Principles of Psychologists (APA, Revised, 2003) is mandatory. Students who knowingly or unknowingly violate any part of the ethical code may be dismissed from the program without further qualification regardless of coursework, research, or other academic achievement. A copy of the ethical code is distributed to students at their initial orientation. Prior to advancement to candidacy, students will be required to sign a statement of understanding that (1) the doctoral faculty will communicate with the clinical internship agency all information relevant to the student’s academic and professional qualifications for placement and continuation in the internship and (2) the student understands that the clinical internship must be satisfactorily completed before graduation.

Faculty

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

San Diego State University:
Program Director: Klonoff
Program Members: Amir, Atkins, Cronan, Elder, Gallo, Gilbert, Hovell, Klonoff, Litrownik, Malcarne, Marshall, Matt, Mattson, Mar, F. Mueller, Murphy, Price, Riley, Roesch, M. Sadler, Thomas, Weersing, Wells, Wulfek, Yeh

University of California, San Diego:
Program Director: Heaton

Courses Acceptable on Master's and Doctoral Degree Programs in Psychology (PSY)

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

UPPER DIVISION COURSES

PSY 501. History of Psychology (3)
Prerequisite: Limited to graduate students or psychology majors with senior standing.

PSY 561. Advanced Neuropsychology (3)
Prerequisite: Psychology 360 or 361 or grade of B or better in Psychology 260.

PSY 587. Advanced Principles of Learning and Cognition (3)
Prerequisites: Psychology 211, 280, and 380. Limited to graduate students or psychology majors with senior standing.

PSY 596. Selected Topics in Psychology (1-3)
Prerequisites: Psychology 101 and consent of instructor. Intensive study in specific areas of psychology. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.
GRADUATE COURSES

NOTE: Graduate courses in psychology are not open to post-baccalaureate unclassified students.

NOTE: Priority for enrollment in graduate courses in psychology is given to psychology students who have the courses as requirements in their respective programs.

PSY 600. Research Orientation (1) Cr/NC
Prerequisite: Admission to the master’s degree program.
Research in psychology. All master’s degree students are required to enroll in this course. Maximum credit two units.

PSY 610. Advanced Research Methods in Psychology (3)
Prerequisite: Admission to the master’s degree program. 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 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 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 751. Clinical Psychology: Theory and Practice (3)
Prerequisites: Graduate standing in psychology and Psychology 350.
Clinical assessment, theory and practice of behavior change, and professional ethics.

PSY 757. Seminar in Selected Topics in Clinical Psychology (1-3)
Prerequisite: Consent of master’s program adviser.
Course may be repeated provided it is offered by a different instructor and the subject matter is substantially different. To enroll in the seminar for the second time, the student must submit a petition to be approved by the professor of the course and the master’s program adviser. Maximum credit six units applicable to a master’s degree.

PSY 760. Seminar in Physiological Correlates of Behavior (3)
Prerequisites: Psychology 260 or six units of biology; and consent of master’s program adviser.
Course may be repeated provided it is offered by a different instructor and the subject matter is substantially different. To enroll in the seminar for the second time, the student must submit a petition to be approved by the professor of the course and the master’s program adviser. Maximum credit six units applicable to a master’s degree.

PSY 767. Seminar in Cognitive and Behavioral Neuroscience (3)
Prerequisite: Consent of instructor for programs outside of psychology master of arts and doctoral program.
Issues of contemporary importance in neuroscience. 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 and the master’s program adviser. Maximum credit six units applicable to a master’s degree.
PSY 770A-770B. Experimental Design and Data Analysis in Behavioral Research (3-3)
Two lectures and two hours of activity.
Prerequisites: Psychology 370, 410, a passing score on the departmental statistics placement test, and consent of master's program adviser.
Principles and methods of behavioral research stressing independence of experimental design and statistical evaluation of results. General linear model in its regression and ANOVA formulations. Advanced multiple regression and correlation techniques using computer-based statistical packages.

PSY 775. Multivariate Statistics in Psychology (3)
Two lectures and two hours of activity.
Prerequisites: Psychology 670A-670B or 770A-770B and consent of instructor.
Introduction to multivariate techniques. Latent structure models with attention to relationship between latent constructs and observable data. Includes causal models, factor analysis (both exploratory and confirmatory), canonical correlation, path analysis, discriminant function analysis, and loglinear analysis.

PSY 790. Practicum in the Teaching of Psychology (1) Cr/NC/RP
Prerequisite: Award of a graduate teaching associateship in psychology.
Supervision in the teaching of psychology, covering lecture writing, style of lecture presentation, in-class demonstration and exercise, test and syllabi construction, and grading system. Not applicable to an advanced degree.

PSY 791. Internship in Program Evaluation (1-6) Cr/NC/RP
Up to 20 hours of supervised work per week in a program approved internship setting.
Prerequisites: Psychology 630 and consent of instructor.
Supervised training in program evaluation in a program approved internship setting. Maximum credit six units.

PSY 792. Internship in Industrial and Organizational Psychology (1-6) Cr/NC/RP
Up to 20 hours of supervised work per week in a program approved internship setting.
Prerequisites: Consent of instructor. Credit or concurrent registration in Psychology 621 and 622.
Supervised training in industrial and organizational psychology in a program approved internship setting. Maximum credit six units.

PSY 796. Selected Topics in Psychology (3)
Prerequisites: Advanced master's and doctoral standing in psychology.
Intensive study in specific areas of psychology. Includes in-depth investigation of controversial issues in the field as well as introduction to current and emerging technologies. Examples include cognitive neuroimaging, cognition and social perception, etc. Maximum combined credit of six units of 696 and 796 applicable to a master's degree.

PSY 797. Research (1-3) Cr/NC/RP
Prerequisite: Consent of master's program adviser.
Research in one of the fields of psychology. Maximum combined credit of six units of 797 and 798 applicable to a master's degree.

PSY 798. Special Study (1-3) Cr/NC/RP
Prerequisite: Consent of master's program adviser.
Individual projects involving library or laboratory research in any area of psychological investigation or interest. Maximum credit of six units of 797 and 798 applicable to a master's degree.

PSY 799A. Thesis (3) Cr/NC/RP
Prerequisites: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master's degree. Credit is contingent upon acceptance of the completed thesis by the Department of Psychology.

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

DOCTORAL COURSES

PSY 801. Seminar in History and Ethics in Psychology (3)
Prerequisite: Admission to doctoral program in clinical psychology. Historical background of modern psychology, in-depth examination of the American Psychological Association code of ethics and its application to the conduct of clinical psychologists.

PSY 820. Seminar in Cultural Psychology (3)
Prerequisite: Admission to doctoral program in clinical psychology. Cultural origins of human behavior; cultural limits of psychological knowledge.

PSY 833. Seminar in Developmental Psychopathology (3)
Prerequisite: Admission to doctoral program in clinical psychology. Research and theory in biological and social origins of psychopathology. Methods of assessing developmental change and stability, issues related to vulnerability and resiliency, developmental appropriateness of approaches to interventions, and role of culture as a developmental context.

PSY 840. Seminar in Personality and Social Psychology (3)
Prerequisite: Admission to doctoral program in clinical psychology. Research and theory in personality and social psychology. Theories of personality and individual differences, group processes, sex roles, social perception, and cross-cultural issues.

PSY 842. Behavioral Medicine Seminar: Assessment (3)
Prerequisite: Admission to doctoral program or approval by instructor and program director. Assessment methods and issues in behavioral medicine. Development and implementation of assessment plans. Theoretical and practical aspects of psychological, behavioral, and physiological assessment methods for various health issues.

PSY 843. Behavioral Medicine Seminar: Intervention (3)
Prerequisite: 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 neuro-
physiology 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, log-linear 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 appli-
cable to a doctoral program.

PSY 894. Clinical Internship (3-15) Cr/NC/RP
Prerequisites: Completion of coursework, second year project, and
advancement to candidacy.
Clinical training in an APA-approved internship setting.

PSY 895. Practicum in the Teaching of Psychology (1-6) Cr/NC
Prerequisite: Admission to doctoral program in clinical psychology.
Supervision in the teaching of psychology, covering lecture writing,
style of lecture presentation, in-class demonstration and exercises,
test and syllabi construction, and grading systems.

PSY 896. Clinical Practicum (1-15)
Prerequisite: Admission to the doctoral program.
Supervision of advanced intervention strategies applied to clinical
populations.

PSY 897. Doctoral Research (1-15) Cr/NC/RP
Prerequisite: Admission to the doctoral program.
Independent investigation in the general field of the dissertation.

PSY 898. Doctoral Special Study (1-8) Cr/NC/RP
Prerequisite: Admission to the doctoral program.
Individual study in the field of specialization. Maximum credit eight
units applicable to the doctoral degree.

PSY 899. Doctoral Dissertation (1-15) Cr/NC/RP
Prerequisites: An officially constituted dissertation committee and
advancement to candidacy.
Preparation of the dissertation for the doctoral degree. Enrollment
is required during the term in which the dissertation is approved.
Public Administration
In the School of Public Affairs
In the College of Professional Studies and Fine Arts

OFFICE: Professional Studies and Fine Arts 100
TELEPHONE: 619-594-6225 / FAX: 619-594-1165

Faculty
Stuart D. Henry, Ph.D., Professor of Public Affairs, Director of School
Roger W. Caves, Ph.D., Professor of Public Affairs
James A. Gazell, Ph.D., Professor of Public Affairs
Lawrence A. Herzog, Ph.D., Professor of Public Affairs
(D.M.P. Graduate Coordinator)
Darrell L. Pugh, Ph.D., Professor of Public Affairs
Sherry Ryan, Ph.D., Professor of Public Affairs
Shawn T. Flanigan, Ph.D., Associate Professor of Public Affairs
Jeffrey S. McIlwain, Ph.D., Associate Professor of Public Affairs
Dana M. Nurge, Ph.D., Associate Professor of Public Affairs
(S.M.C.J.C. Graduate Coordinator)
Salvador Espinosa, Ph.D., Assistant Professor of Public Affairs
Alan C. Mobley, Ph.D., Assistant Professor of Public Affairs

General Information
The School of Public Affairs offers graduate study leading to the Master of Public Administration degree. Research facilities provided include the Institute of Public and Urban Affairs and the Public Administration Center.

The San Diego metropolitan community affords significant internship opportunities for the graduate student in federal, state, and local government agencies.

The School of Public Affairs’ M.P.A. degree is accredited by the National Association of Schools of Public Affairs and Administration (NASPAA) and listed on its annual roster of accredited programs found to be in conformity with standards established for professional master’s degrees in public affairs and administration.

Master of Public Administration Degree
This degree permits the selection, under advisement, of a program of course and seminar work which may be oriented toward a generalist approach or with a research focus on organizational behavior and development, public policy, fiscal policy and administration, recreation administration, or urban administration. Also offered are concentrations in criminal justice administration and city planning, each consisting of 15 units within the required program for the Master of Public Administration. Since management responsibilities are shared by administrators in a number of professional areas in the public service, the student is encouraged to supplement the study of government and administration with graduate courses in economics, sociology, psychology, business administration, and other related areas.

Admission to Graduate Study
All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. The student must also satisfy the following requirements: (1) a 3.0 grade point average in the undergraduate major and a 2.85 overall average; and (2) an acceptable score on the GRE General Test.

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

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

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

School of Public Affairs
The following materials should be mailed or delivered to:
School of Public Affairs
Master of Public Administration
(Attention: Dr. Stuart D. Henry)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4505

(1) Two letters of reference from individuals who have known the student’s academic work and/or employment performance.

Advancement to Candidacy
All students must meet the general requirements for advancement to candidacy, as described in Part Four of this bulletin and be recommended by the faculty. In order to be recommended for advancement, a student must have achieved a grade point average of 3.0 in Public Administration 600 and three additional courses from among Public Administration 604, 605 or 606, 630, 642, 650, 660, with no grade below B–.
Specific Requirements for the Master of Public Administration Degree
(Major Code: 21021) (SIMS Code: 666901)

In addition to meeting the requirements for classified graduate standing, the student must satisfy the basic requirements for the master's degree as described in Part Four of this bulletin. Students must also complete as a part of their programs: (1) at least 27 units of 600- and 700-numbered courses including Public Administration 600, 604, 605 or 606, 630, 642, 650 and 660; (2) a minimum of nine additional units of 500-level or graduate courses in public administration or related fields selected under advisement. An internship of 12 units (one semester) beyond the 36 units of coursework is required of students who have not had equivalent experience. The internship normally will be served in a governmental agency where the intern will perform administrative duties. Placements typically will be made in the office of a city manager, a budget office, a personnel office or in the office of the head of a major operating department. Public Administration 799A, Thesis, must be included in the program unless Plan B with a comprehensive written examination in lieu of the thesis is selected by the student with the approval of a graduate adviser; and (3) Students who specialize in Public Personnel and Labor Relations must take Public Administration 530, 531, 632, and 643.

Concentration in
Criminal Justice Administration
(Major Code: 21051) (SIMS Code: 666926)

Students must complete 15 units from the following courses as part of the M.P.A. degree:
- CJ 601 Seminar in the Administration of Criminal Justice (3)
- CJ 602 Seminar in Comparative Criminal Justice System (3)
- CJ 603 Seminar in Community and Restorative Justice (3)
- CJ 604 Seminar in Criminal Justice and Urban Administration (3)
- CJ 605 Seminar in Juvenile Justice and Youth Violence (3)

Concentration in City Planning
(Major Code: 02061) (SIMS Code: 666918)

Students must complete the following courses as part of the M.P.A. degree:
- P A 525 The U.S. City Planning Process (3)
- C P 630 Seminar in Urban Planning Implementation (3)
- C P 640 Seminar in Urban Planning Theory (3)
- C P 670 History of Urban Planning (3)
- C P 690 Seminar in Land Use Planning Principles and Techniques (3)

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

General Information

The School of Public Affairs and the Center for Latin American Studies offer a concurrent graduate program leading to a Master of Public Administration and a Master of Arts in Latin American Studies. This concurrent degree program offers students preparation in the fields of public administration and Latin American studies for the purpose of public administration in fields requiring bi-national understanding of administration in the public sector.

If a student in the concurrent graduate program returns to a single degree program, none of the provisions of the concurrent degree program shall pertain. Transfer units will not be accepted towards the concurrent degrees, nor will previous graduate study or prior degrees be accepted toward meeting the unit requirements.

Admission to the Degree Curriculum

All students must satisfy the general requirements for admission to the university with classified graduate standing as described in Part Four of this bulletin. The successful applicant will also satisfy the requirements for both the Master of Public Administration and the Master of Arts in Latin American Studies. To be admitted to the program, students must have (1) a 3.0 grade point average in the undergraduate major and 2.85 overall and (2) an acceptable score on the Graduate Record Examination (GRE) General Test. Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee as described in Part Four of this bulletin.

The following materials should be mailed or delivered to:
Center for Latin American Studies
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-6038

(1) Personal statement;
(2) Three letters of reference from individuals who have known the student's academic performance (one letter may be from an individual who knows the employment performance of the student).

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin and be recommended by the graduate advisers of both programs. In addition, all students must (1) complete Public Administration 600 and three additional courses selected from Public Administration 604, 605 or 606, 630, 642, 650, 660; (2) complete Latin American Studies 600 and 601; (3) achieve a grade point average of 3.0 in these 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 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**
- CJ 601 Seminar in the Administration of Criminal Justice (3)
- CJ 602 Seminar in Comparative Criminal Justice System (3)
- CJ 603 Seminar in Community and Restorative Justice (3)
- CJ 604 Seminar in Criminal Justice and Urban Administration (3)
- CJ 605 Seminar in Juvenile Justice and Youth Violence (3)

**Public Personnel and Labor Relations Theme**
- P A 530 Negotiation and Bargaining in the Public Service (3)
- P A 531 Governmental Employer-Employee Relations (3)
- P A 632 Seminar of Organization Development in the Public Sector (3)
- P A 643 Seminar in Administrative Behavior (3)
- (Offered only at IVC)

**General Public Administration Theme**
- P A 620 Seminar in Management of Urban Governments (3)
- P A 632 Seminar of Organization Development in the Public Sector (3)
- P A 640 Seminar in Public Administration (3)

4. Complete five courses from at least two departments (15 units):

**Latin American Studies**
- LATAM 540 History, Society, and Ecology of Baja Peninsula (3)
- LATAM 550 Mexican-US Border from a Latin American Perspective (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 582 Regional Anthropology* (3)
- ANTH 583 Topical Anthropology* (3)

**Economics**
- ECON 565 North American Economic Relations (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 Political Eclogy of Latin America (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 Sociology of the United States-Mexico Transborder Populations and Globalization (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.

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**Courses Acceptable on Master's Degree Program in Public Administration (CJ) (P A)**

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

**Public Administration (P A)**

**UPPER DIVISION COURSES**

- **P A 501. Nonprofit Organizations and Government (3)**
  Prerequisites: Public Administration 301 and 460.
  How nonprofit organizations interact with government institutions, influence and pressure government through policy advocacy and activism, and partner with government in contracting, public service provision, and policymaking.

- **P A 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 571. Managing Water and Energy Resources (3)
Prerequisite: Public Administration 301. Management and economics of water and energy resources; delivery systems, regulatory framework, and renewable resources. Contemporary water and energy management issues.

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. 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 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 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 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/NC
Prerequisite: Consent of instructor. The 12 units of 796 will be exempt from the University's requirement that courses graded Cr/NC be limited to 30 percent of units for the master's degree.

P A 797. Research in Public Administration (3) Cr/NC
Prerequisite: Consent of director of public affairs. Research in one of the areas of public administration. Maximum credit six units applicable to a master's degree.

P A 798. Special Study (1-3) Cr/NC
Prerequisite: Consent of staff, to be arranged with the director and instructor. Individual study. Maximum credit six units applicable to a master's degree.

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

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

P A 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program courses. Registration required of students whose only requirement is completion of the comprehensive examination for the master’s degree. Registration in 799C limited to two semesters.
CJ 50. Contemporary Issues in Law Enforcement (3)
Prerequisite: Criminal Justice 301.
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.

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.

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.

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.

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.

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.

GRADUATE COURSES

CJ 601. Seminar in the Administration of Criminal Justice (3)
Prerequisite: Criminal Justice 301.
Administrative problems of criminal justice systems.

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.

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.

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.

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.

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.

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.

CJ 797. Research in Criminal Justice (3) Cr/NC/RP
Prerequisite: Consent of instructor.
Research in one of the areas of criminal justice administration. Maximum credit six units applicable to a master’s degree.

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

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

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

CJ 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program courses.
Registration required of students whose only requirement is completion of the comprehensive examination for the master’s degree. Registration in 799C limited to two semesters.
Public Health
In the College of Health and Human Services

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Eunha Hoh, Ph.D., Associate Professor of Public Health
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Susan Mackintosh, Ph.D., Graduate Adviser

Preventive Medicine Residency
Linda L. Hill, M.D., M.P.H., Adjunct Associate Professor of Public Health,
Director
Kevin M. Patrick, M.D., M.P.H., Adjunct Professor of Public Health,
Associate Director

The John J. Hanlon Chair in Health Services Research and Policy
Alvarado Hospital Medical Center has joined with SDSU's faculty and staff to create The John J. Hanlon Chair in Health Services Research and Policy in the Graduate School of Public Health (GSPH). The chair is named in honor of the late Dr. John J. Hanlon, former assistant surgeon general for the U.S. Public Health Service. Dr. Hanlon coordinated the planning and development of SDSU's Graduate School of Public Health.

General Information
The Graduate School of Public Health offers advanced study leading to the degrees of Doctor of Philosophy, Master of Public Health, Master of Science, and a program that allows students to earn the Master of Public Health concurrently with the Master of Social Work, the Master of Arts in Latin American Studies, or the Doctor of Medicine. The Ph.D. is offered in three concentration areas, to include epidemiology, global health, health behavior with various specialization opportunities (see doctoral program); the M.P.H. is offered with concentrations in the areas of biometry, environmental health, epidemiology, health promotion and behavioral science, health management and policy, and a specialization in global emergency preparedness and response; the M.S. degree is offered with a concentration in the area of toxicology. In addition to these advanced degree programs, the school offers a preventive medicine residency program that prepares qualified physicians to sit for the American Board of Preventive Medicine certification examination. Residents may receive the M.P.H. degree along with completion of this residency program. Finally, the public health faculty directs academic study leading to a Bachelor of Science degree in health science for those undergraduate students interested in public health. For more information concerning this undergraduate program, see the General Catalog.

The Graduate School of Public Health is nationally accredited by the Council on Education for Public Health (CEPH). The graduate program in health management and policy is accredited by the Commission on Accreditation for Health Management Education (CAHME), and the preventive medicine residency program is accredited by the Accrediting Commission for Graduate Medical Education (ACGME).

The curriculum in the Graduate School of Public Health has been designed to prepare students as practitioners of public health as well as for careers in teaching and research and as leaders in both public and private sector agencies and organizations. To accomplish this mission effectively, the faculty of the Graduate School of Public Health is augmented by expert practitioners in specialized fields related to public health who contribute to both the academic and practical experiences of students pursuing public health degrees. These professionals, who hold research or adjunct professorships in the school, come from a variety of settings such as the County Health and Human Services Agency, military services, hospitals, HMOs, managed care agencies, industry, and other academic institutions.

The Graduate School of Public Health has established close cooperation between the GSPH at San Diego State University and the Department of Family and Preventive Medicine in the School of Medicine at the University of California, San Diego. The UCSD medical school faculty has joined the public health faculty at SDSU in offering the Ph.D. in public health as well as the preventive medicine residency program. Under a special affiliation agreement between the two institutions, medical students at UCSD may take public health courses at
Research

Faculty and student research in the broad interdisciplinary field of public health is conducted within the various specialized areas that are generally defined by the degree concentrations. The following descriptions illustrate the focus of research within each of these areas.

Biometry and Biostatistics: Development and application of statistical methods and models in the fields of public health, medicine, and biology. A concentration in biometry, and the scope of the academic and research opportunities in the university may be seen in the listing for the program in biostatistics and biometry presented earlier in this bulletin.

Environmental Health: Identification, evaluation and control of chemical, biological and physical agents in the environment. Current emphasis is on U.S.–Mexico border issues and on applying emerging technologies to environmental programs.

Epidemiology: Identification of biological, environmental, social, and behavioral risk factors of human disease; determination of the distribution and etiology of disease in human populations, particularly infectious and chronic diseases.

Global Emergency Preparedness and Response: Development of a unified framework for disaster epidemiology; research on appropriate development and relative effectiveness of training of public health workforce; advancement of evidence-based research in emergency/trauma preparedness and responsiveness; evaluation of the ability of local public health agencies to meet preparedness standards; and improvement of regional/national/international management of trauma and emergency care clinical services through communication and information management.

Health Promotion and Behavioral Science: Behavioral science applied to health-related behavior for the identification of risk factors for physical and mental health “illnesses,” and the experimental evaluation of interventions aimed at changing risk practices or promoting health enhancing behavior; emphasis is placed on vulnerable populations, such as low income, minority, women, and children.

Health Management and Policy: Management of health care facilities, services, and organizations; planning and evaluation of public and private sector programs; administration and operations in specialty services, hospitals, ambulatory care, insurance companies, HMOs, and other health-related organizations.

Toxicology: Study of toxicity, biologic mechanisms of action, and the health risk of exposure to chemicals in the environment.

Affiliated Research Centers

In an effort to serve better the community at large, the Graduate School of Public Health sponsors the Institute for Public Health. The institute serves as the school’s bridge with the community, facilitating field practice opportunities, community-based research and program evaluations, and a venue for continuing education.

In addition, a number of research centers have been established to integrate the specialized research of its faculty and students. These are the Center for Behavioral and Community Health, the Center for Behavioral Epidemiology and Community Health, the California Distance Learning Health Network, and the Center for Injury Prevention Policy and Practice. For more information on these centers, see Part Three of this bulletin.

Admission to Master’s and Doctoral Study

Master of Public Health Degree

Master of Science Degree in Public Health

Application procedures and deadlines are being revised. Prospective applicants for the Master of Public Health and Master of Science degree programs should go to http://publichealth.sdsu.edu to obtain information on application procedures and deadlines.

Master of Public Health Degree and Master of Arts Degree in Latin American Studies

Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee as described in Part Two of this Bulletin. All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Graduate School of Public Health.

Graduate Admissions

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

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

(1) Official transcripts (in sealed envelopes) from all post-secondary institutions attended:

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

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

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

Graduate School of Public Health

Applicants seeking admission to the Master of Public Health and Master of Arts degree in Latin American Studies should contact the Graduate School of Public Health requesting appropriate descriptive materials. Detailed application instructions can be obtained from our Web site at http://publichealth.sdsu.edu.

Students who do not fully meet the requirements for admission with classified graduate standing may be considered for conditionally classified graduate standing upon recommendation of the admissions committee and the graduate adviser.

Master of Social Work Degree and Master of Public Health Degree

Students applying for admission should electronically submit the university application available at http://www.csumentor.edu along with the $55 application fee as described in Part Two of this Bulletin. All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Social Work.

Graduate Admissions

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

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

(1) Official transcripts (in sealed envelopes) from all post-secondary institutions attended:

Note:
- Students who attended SDSU need only submit transcripts for work completed since last attendance.
- Students with international coursework must submit both the official transcript and proof of degree. If documents are in a language other than English, they must be accompanied by a certified English translation.
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
5500 Campanile Drive
San Diego, CA 92182-4119

(1) A narrative statement as described in Instructions for Applicants;
(2) Three letters of recommendation.

Admission to the Degree Curriculum

All applicants 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, 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); 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 (56 units for students in Health Management and Policy) including: (1) Public Health 601, 602, 603, 604, and 605 (students in health management and policy will substitute Public Health 641 for Public Health 605 and students in health promotion and behavioral science will substitute Public Health 661 and 662 for Public Health 603); (2) a minimum of 21 units of graduate courses in the area of concentration; (3) a minimum of three and a maximum of 12 units of supervised field placement; and (4) electives selected with the approval of the graduate adviser. In addition, Public Health 797, Research, Public Health 798, Special Study, or Public Health 799A, Thesis, must be included in the program as a capstone experience.

Concentrations in biometry, epidemiology, and health promotion and behavioral science require three units of field placement for the Master of Public Health degree. The concentration in health management and policy and the concentration in environmental health both require six units of field placement.

Up to nine units of graduate credit may be accepted in transfer, with the approval of the graduate adviser.

In special circumstances, the graduate adviser may approve one course not on the list of prescribed electives. The substitution must be approved prior to enrollment in the course.
Concentration in Biometry
(SIMS Code: 557308)
Courses required for the concentration:
P H 601 Epidemiology (3)
P H 602 Biostatistics (3)
P H 603 Behavioral and Social Science in Public Health (3)
P H 604 Environmental Determinants of Human Health (3)
P H 605 Health Services Administration (3)
P H 623 Epidemiological Methods (3)
P H 627 Advanced Statistical Methods in Public Health (3)
P H 628 Applications of Multivariate Statistics in Public Health (3)
P H 650R Required Community Practice (3) Cr/NC
STAT 551A Probability and Mathematical Statistics (3)
STAT 551B Probability and Mathematical Statistics (3)
Prescribed electives: Six units selected from the following public health courses:
P H 649 Border and Global Public Health Surveillance (3)
P H 700A Seminar in Public Health: Epidemiology (3)
P H 722 Seminar in Clinical Trials (3)
P H 724 Advanced Methods in Epidemiology (3)
P H 823 Case-Control Studies (3)
P H 824 Cohort Studies (3)
P H 826 Analysis of Case-Control Studies (3)
P H 827 Analysis of Cohort Studies (3)
Prescribed electives: Six units selected from the following statistics courses:
STAT 560 Sample Surveys (3)
STAT 670A-670B Advanced Mathematical Statistics (3-3)
STAT 672 Nonparametric Statistics (3)
STAT 676 Bayesian Statistics (3)
STAT 677 Design of Experiments (3)
STAT 678 Survival Analysis (3)
STAT 679 Analysis of Discrete Data (3)
STAT 680A-680B Advanced Biostatistical Methods (3-3)
Electives: Three units to be selected with approval of concentration faculty from any public health or statistics course.

Concentration in Environmental Health
(SIMS Code: 557315)
Courses required for the concentration:
P H 601 Epidemiology (3)
P H 602 Biostatistics (3)
P H 603 Behavioral and Social Science in Public Health (3)
P H 604 Environmental Determinants of Human Health (3)
P H 605 Health Services Administration (3)
P H 632 Air Quality (3)
P H 634 Environmental Protection (3)
P H 636 Hazardous Waste Management (3)
P H 638A Principles of Toxicology (3)
P H 639 Water Quality Investigation (3)
P H 750D Advanced Field Practice: Environmental Health (3) Cr/NC
P H 750D Advanced Field Practice: Environmental Health (3) Cr/NC
Prescribed electives: A minimum of nine additional units selected with the approval of the adviser from:
P H 630 Environmental Health Risk Assessment (3)
P H 700D Seminar in Public Health: Environmental Health (3)
P H 738 Topics in Toxicology (3)
P H 778 Global Environmental Health (3)
P H 798 Special Study (1-3) Cr/NC/RP

Concentration in Epidemiology
(SIMS Code: 557329)
Courses required for the concentration:
P H 601 Epidemiology (3)
P H 602 Biostatistics (3)
P H 603 Behavioral and Social Science in Public Health (3)
P H 604 Environmental Determinants of Human Health (3)
P H 605 Health Services Administration (3)
P H 621 Epidemiology of Infectious Diseases (3)
P H 622 Epidemiology of Chronic Diseases (3)
P H 623 Epidemiological Methods (3)
P H 627 Advanced Statistical Methods in Public Health (3)
P H 650R Required Community Practice (3) Cr/NC
Prescribed electives: Six units selected from the following public health courses in epidemiology:
P H 625 Control of Infectious Diseases (3)
P H 626 International Health Epidemiology Practicum (3)
P H 628 Applications of Multivariate Statistics in Public Health (3)
P H 649 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 725 Scientific Writing for Epidemiology (3) Cr/NC
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: 557388)
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)

Graduate Program in Health Management and Policy
(CAHME Accredited)

Courses required for the concentration:
P H 601 Epidemiology (3)
P H 602 Biostatistics (3)
P H 603 Behavioral and Social Science in Public Health (3)
P H 604 Environmental Determinants of Human Health (3)
P H 641 Introduction to Health Services (3)
P H 644A Health Services Organization and Management (3)
P H 644B Managing High Performing Health Care Organization (3)
P H 645 Health Economics (3)
P H 647 Quantitative Methods and Health Data Analysis (3)
P H 648 Health Policy (3)
P H 650R Required Community Practice (3) Cr/NC
P H 742A Health Services Financial Management (3)
P H 742B Health Insurance and Financing Systems (3)
P H 747 Quality Improvement and Program Evaluation (3)
P H 748 Health Services Competitive Strategy and Marketing (3)
P H 750E Advanced Field Practice: Health Management and Policy (3) Cr/NC
P H 798 Special Study (2) Cr/NC/RP
P H 797 Research (3) Cr/NC/RP

OR

P H 799A Thesis (3) Cr/NC/RP

Prescribed electives (three units selected with approval of adviser). In special circumstances, the graduate adviser may approve one course not on the list of prescribed electives. The substitution must be approved prior to enrollment in the course.
P H 700E Seminar in Public Health: Health Management and Policy (3)
P H 743 Hospital and Ambulatory Health Management (3)

Concentration in Health Promotion and Behavioral Science
(SIMS Code: 557344)

Courses required for the concentration:
P H 601 Epidemiology (3)
P H 602 Biostatistics (3)
P H 604 Environmental Determinants of Human Health (3)
P H 605 Health Services Administration (3)
P H 607 Research Methods (3)
P H 650R Required Community Practice (3) Cr/NC
P H 661 Theoretical Foundations of Health Promotion (3)
P H 662 Motivating Health Behavior (3)
P H 663 Health Promotion Communications Theory and Design (3)
P H 666 Health Promotion Program Planning and Assessment (3)
P H 664 Health, Society and Human Behavior (3)
P H 667 Prevention and Control of Chronic Diseases (3)
P H 688 Seminar in Health Promotion Research (3)
P H 700F Seminar in Public Health: Health Promotion and Behavioral Science (3)
P H 762 Behavioral Medicine (3)
P H 797 Research (3) Cr/NC/RP

Prescribed electives (choose two or more different courses from):
P H 664 Health, Society and Human Behavior (3)
P H 667 Prevention and Control of Chronic Diseases (3)
P H 688 Seminar in Health Promotion Research (3)
P H 700F Seminar in Public Health: Health Promotion and Behavioral Science (3)
P H 762 Behavioral Medicine (3)
P H 797 Research (3) Cr/NC/RP

Electives: Six units to be selected with the approval of the faculty from any graduate level public health course.

Master of Science Degree in Public Health

Admission to the Degree Curriculum

The M.S. degree in Public Health is offered with a concentration in the area of toxicology.

To be considered for admission to this program, a student must have successfully completed an undergraduate degree (BA or BS) in biology, chemistry, engineering, or other basic or applied natural science. The Graduate School of Public Health should be consulted for specific course preparation recommended for the Master of Science program. In some cases, if an applicant is deficient in certain basic or applied science areas, some remedial coursework can be completed as an unclassified graduate student. However, credits earned by remedial courses cannot be applied toward the required number of units for the master's degree. Students who do not meet all of the above requirements for admission with classified graduate standing may be admitted with conditionally classified graduate standing upon the recommendation of the admissions committee and the graduate adviser. Students so admitted will be advised as to remedial steps to take to satisfy the requirement to achieve classified graduate standing.

Prerequisite courses are Public Health 601 and Public Health 602 or their equivalents as determined by the graduate adviser. If these courses or their equivalents have not been completed prior to admission, they should be included in the first semester course requirements.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin. Students completing the Master of Science degree with a concentration in toxicology must (1) have satisfactorily completed at least 12 units of coursework of the 36-unit official program to include at least two courses chosen from the list of courses required with a minimum grade point average of 3.0 (B) and no grade less than a B-; (2) have a thesis proposal which has received the approval of the Graduate School of Public Health faculty.

General Requirements for the Master of Science Degree

(Major Code: 12141) (SIMS Code: 557302)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, the student must complete an officially approved course of study of not less than 36 units as listed below. Up to six units may be accepted in transfer, with the approval of the graduate adviser. Requirements are as shown below:

Toxicology

Required 15
Prescribed electives 15
Field Practice* --
P H 797 (Research) 3
P H 799A (Thesis) 3

Total units: 36

* A 3-unit field practice may be taken as an elective by students with approval of the academic adviser.
Specific Requirements for Master of Science Degree Programs

Concentration in Toxicology
(SIMS Code: 557395)

Prerequisite courses (6 units):
PH 601 Epidemiology (3)
PH 602 Biostatistics (3)

Courses required for the concentration (15 units):
PH 630 Environmental Health Risk Assessment (3)
PH 637 Mechanism of Toxicity (3)
PH 638A Principles of Toxicology (3)
PH 638B Methods in Toxicity Testing (3)
PH 738 Topics in Toxicology (3)

Prescribed electives: A minimum of 15 units of coursework selected from the following list with the approval of the faculty adviser.
PH 603 Behavioral and Social Science in Public Health (3)
PH 604 Environmental Determinants of Human Health (3)
PH 627 Advanced Statistical Methods in Public Health (3)
PH 632 Air Quality (3)
PH 635 Environmental and Disaster Medicine (3)
PH 636 Hazardous Waste Management (3)
PH 639 Water Quality Investigation (3)
PH 650D Field Practice: Environmental Health (3) Cr/NC
PH 700D Seminar in Public Health: Environmental Health (3)
PH 798 Special Study (1-3) Cr/NC/RP

In special circumstances, the graduate adviser may approve one course not on the list of prescribed electives. The substitution must be approved prior to enrollment in the course.

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 (18 units)</th>
<th>Prescribed Electives (15 units from at least two departments)</th>
<th>Culminating Experience (6 units)</th>
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<td>P H 601 (3)</td>
<td>ANTH 508 (3)</td>
<td>P H 797 or LATAM 797 (3)</td>
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<td>LATAM 580 (3)</td>
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<td>WMNST 565 (3)</td>
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<td></td>
<td>HIST 551 (3)</td>
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<td>POL S 568 (3)</td>
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<td>WMNST 580 (3)</td>
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<td>HIST 640 (3)</td>
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<td>POL S 655 (3)</td>
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<td>WMNST 605 (3)</td>
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<td>POL S 661 (3)</td>
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</tbody>
</table>

**Public Health Concentration Requirements**

(Students must complete one of the following concentrations)

<table>
<thead>
<tr>
<th>Epidemiology Concentration (SIMS Code: 997311)</th>
<th>Total Units = 24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Courses (15 units)</td>
<td></td>
</tr>
<tr>
<td>P H 603 (3)</td>
<td></td>
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<tr>
<td>P H 621 (3)</td>
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<td>P H 622 (3)</td>
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<td>P H 623 (3)</td>
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<tr>
<td>P H 627 (3)</td>
<td></td>
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<tr>
<td>Prescribed Electives (6 units)</td>
<td></td>
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<tr>
<td>P H 625 (3)</td>
<td></td>
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<tr>
<td>P H 626 (3)</td>
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<td>P H 628 (3)</td>
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<tr>
<td>P H 649 (3)</td>
<td></td>
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<tr>
<td>P H 700A (3)</td>
<td></td>
</tr>
<tr>
<td>Electives (3 units)</td>
<td></td>
</tr>
<tr>
<td>BIOL 585, NUTR 600, 607, 700, STAT 510, 550, 551A, 560, 672, 677, or three units of electives to be selected with approval of the faculty advisory committee.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Health Promotion and Behavioral Science Concentration (SIMS Code: 997312)</th>
<th>Total Health Promotion and Behavioral Science Units = 24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Courses (15 units)</td>
<td></td>
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<tr>
<td>P H 607 (3)</td>
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<tr>
<td>P H 661 (3)</td>
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<td>P H 662 (3)</td>
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<td>P H 663 (3)</td>
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<tr>
<td>P H 666 (3)</td>
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<tr>
<td>Prescribed Electives (6 units)</td>
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<tr>
<td>P H 664 (3)</td>
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<tr>
<td>P H 667 (3)</td>
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<td>P H 668 (3)</td>
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<td>P H 700F (3)</td>
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<tr>
<td>P H 762 (3)</td>
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<tr>
<td>Electives (3 units)</td>
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<tr>
<td>Three units to be selected with the approval of the faculty advisory committee.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Environmental Health Concentration (SIMS Code: 997313)</th>
<th>Total Environmental Health Units = 24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Courses (18 units)</td>
<td></td>
</tr>
<tr>
<td>P H 603 (3)</td>
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<td>P H 632 (3)</td>
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<td>P H 634 (3)</td>
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<tr>
<td>P H 636 (3)</td>
<td></td>
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<tr>
<td>P H 638A (3)</td>
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<tr>
<td>Prescribed Electives (at least 6 units)</td>
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<tr>
<td>P H 639 (3)</td>
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<tr>
<td>Electives (3 units)</td>
<td></td>
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<tr>
<td>Three units to be selected with the approval of the faculty advisory committee.</td>
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</tbody>
</table>

**Admission to the Degree Curriculum**

To request application materials for the concurrent graduate program in Social Work and Public Health, applicants should write to the Director of the MSW/MPH Advisory Committee, Graduate School of Public Health, San Diego State University. All necessary application forms, instructions for filing them, and information about the program will be sent. In order to be considered for the concurrent MSW/MPH program, applicants must meet the general requirements for admission to graduate study at the university (see Part Four of this bulletin).

Applicants must have a minimum 2.85 grade point average in the last 60 semester or 90 quarter units in undergraduate work completed. Undergraduate preparation in at least one of the following areas is preferred: social work, social or behavioral sciences, or health science. Applicants must have a satisfactory score on the GRE General Test. Applicants already holding another master’s degree or higher degree from an acceptable accredited graduate school are exempt from the GRE.
A committee composed of faculty from Public Health and Social Work will make all admission recommendations to the dean of the Division of Graduate Affairs.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin. All core courses in public health and social work must be completed prior to advancement. In addition, the student must: (1) have earned at least 24 units of graduate study within the concurrent program with a minimum grade point average of 3.0 and no grade less than a B– in each core course; (2) have been recommended for advancement by the combined faculty advisory committee; received credit (Cr) in field practicum; (3) have a thesis proposal approved by the combined faculty advisory committee. Upon advancement to candidacy, the student will enroll in Public Health 797 (Research), Social Work 797 (Research), and Public Health 799A (Thesis) or Social Work 799A (Thesis). A thesis incorporating theory, method, and analytic techniques from both disciplines is the culminating experience for the concurrent program leading to the M.S.W. and M.P.H. degrees.

Specific Requirements for the MSW/MPH Degree

(Major Code: 12991) (SIMS Code: 998210)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the student must complete an officially approved course of study of not less than 90 units.

Social Work/Public Health - Health Management and Policy (SIMS Code: 998220)

- SWORK 601 Seminar in Social Welfare Policy and Services (3)
- SWORK 619 Human Behavior in the Social Environment (3)
- SWORK 620A Seminar in Human Behavior and Social Environment: Direct Practice (3)
- SWORK 630 Social Work Practice: A Generalist Perspective (3)
- SWORK 631 Social Work Practice: Individuals, Families, and Groups (3)
- SWORK 632 Social Work Practice: Organizations and Communities (3)
- SWORK 650* Field Practicum (7) Cr/NC
- SWORK 690 Seminar in Research Methods for Social Work and Gerontology (3)
- SWORK 740 Advanced Seminar in Administration and Community Development in Social Work and Gerontology (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 644A Health Services Organization Management (3)
- P H 644B Managing High-Performing Health Care Organization (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
- SWORK 799A or Thesis (3) Cr/NC/RP
- Electives: Three units of social work electives.

Transfer units will not be accepted toward the concurrent MSW/MPH degree program. Graduate study or degrees obtained previously will not be accepted toward meeting the unit requirements of the concurrent MSW/MPH degree program.

If a student, after entering the concurrent MSW/MPH program returns to a single degree program, all of the requirements for the single degree program must then be met.

* Social Work 650 and 755 must have the approval of the faculty advisory committee. Responsibility for faculty field supervision will be assigned in social work.

Section II.

Doctoral Program

http://publichealth.sdsu.edu

A Ph.D. is offered in three concentration areas, epidemiology, global health, and health behavior.

Ph.D. in Public Health with a Concentration in Epidemiology

(Major Code: 12141) (SIMS Code: 557329)

A Ph.D. in public health with a concentration in epidemiology is offered by the joint faculties of the Division of Epidemiology and Biostatistics, Graduate School of Public Health at San Diego State University, and the Department of Family and Preventive Medicine, School of Medicine at the University of California, San Diego (UCSD). Emphasis is on producing graduates with a mastery of the central concepts and analytic processes of epidemiology for application to a multitude of disciplines. Specializations are offered through both campuses, including infectious and chronic diseases, global health, exercise science, medical geography, and behavioral epidemiology. Graduates of this program are competitive for a variety of research, teaching, and community service positions in areas such as academic institutions, local and state health departments, federal and international agencies, and both privately and publicly sponsored research institutes.

Ph.D. in Public Health with a Concentration in Global Health

(Major Code: 12141) (SIMS Code: 557411)

A Ph.D. in public health with a concentration in global health is offered by the joint faculties of the Graduate School of Public Health at San Diego State University (SDSU), and the School of Medicine at the University of California, San Diego (UCSD). Global health relates to health issues and concerns that transcend national borders, class, race, ethnicity, and culture. Studies in global health stress the commonality of health issues for the United States and international partners, and involve collective, science-based interventions to resolve these issues. Knowledge about how national governments, multinational organizations, non-governmental organizations, and the private sector must work together is essential to the success of global health programs. Emphasis is on preparing graduates with the fundamental scientific knowledge, ethical understanding, and specific skills to become public health researchers and professional leaders in multiple settings. Proximity to the U.S./Mexico border and the expertise of many current faculty members at both SDSU and UCSD support and encourage a focus on transborder problems including infectious diseases (e.g., HIV, TB, STDs), non-communicable diseases (diabetes, CVD), and migrant health. Students may develop other areas of specialization such as environmental health, health policy, geographic information systems, and maternal/child health. Required and elective courses include global health practice and theory, program planning and evaluation, emerging infectious diseases, advanced epidemiology and biostatistics, research methods, environmental health, and global maternal/child health. In addition to didactic classes at both partner institutions, students will be expected to complete an international field practicum involving research, policy work, or cultural training. Graduates of the program are competitive for a variety of research, teaching and service positions in academic institutions, governmental and non-governmental organizations, and businesses with global health interests both within and outside of the United States.
Public Health

Ph.D. in Public Health with a Concentration in Health Behavior
(Major Code: 12143) (SIMS Code: 557321)

A Ph.D. in public health with a concentration in health behavior is offered by the joint faculties of the Division of Health Promotion and Behavioral Science, Graduate School of Public Health at San Diego State University, and the Department of Family and Preventive Medicine, School of Medicine at the University of California, San Diego (UCSD). Emphasis is on producing graduates with a mastery of the central concepts and analytic processes of health behavioral sciences. Graduates of the program are expected to establish advanced skills in behavior change theory and practice; to establish expertise in advance qualitative and quantitative research methods; to establish advanced skills in the application of interventions and research methods to health behavior in disenfranchised populations; and to establish skills necessary to understand and change health policy. Graduates of the program are competitive for a variety of research, teaching, and community service positions in areas such as academic institutions, local and state health departments, federal and international agencies, and both privately and publicly sponsored research institutions.

Admission to the Degree Curriculum

Applicants for admission to the doctoral program must present evidence of capacity for graduate study in public health. A multidisciplinary field such as public health draws from a wide variety of undergraduate majors, but the student is expected to have a strong grounding in the quantitative, behavioral, and biological sciences. A master's degree in an area related to the concentration is preferred. Admission to the program requires acceptance by both institutions on recommendation of the participating units at SDSU and UCSD. It is understood that acceptance of a student into the joint program by each of the units will be conditioned by their respective standards for graduate admissions and also the available facilities.

To be considered for admission to the joint SDSU-UCSD doctoral program in public health, students must meet the general requirements for admission to both universities with classified graduate standing as outlined in the respective current catalogs. These include: (a) an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or equivalent academic preparation, as determined by the deans of the two 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.
Faculty

Faculty members of the cooperating institutions participate in the joint doctoral program in Public Health Epidemiology and are available for direction of research and as members of joint doctoral committees.

Dissertation

Following successful completion of the qualifying examination and advancement to candidacy, the major remaining requirement for the Ph.D. degree will be satisfactory completion of a dissertation consisting of original and significant research carried out under the guidance of the dissertation adviser, who may be from either SDSU or UCSD. The doctoral committee becomes the dissertation committee after the student's advancement to candidacy. Requirements currently in force at SDSU and UCSD must be met for completing and filing the dissertation.

Award of the Degree

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

Financial Support

The Graduate School of Public Health at SDSU and the Department of Community and Family Medicine at UCSD endeavors to provide financial support that will enable all students to devote full time to research training and study.

Medical Students Interested in Obtaining the Master of Public Health (M.P.H.) Degree

San Diego State University, Graduate School of Public Health, and University of California, San Diego, School of Medicine, offer a collaborative education effort to enable UCSD medical students to also obtain the M.P.H. degree. The program is designed for those UCSD medical students who anticipate careers in one or more of the following fields: public health, preventive medicine, maternal and child health, epidemiology, environmental health, health promotion and behavioral science, health management and policy, or aerospace medicine, and to those with special interest in such areas as nutrition, demography, international health, and behavioral medicine. In addition, it provides public health training for those planning careers in family practice, pediatrics, general internal medicine, and other aspects of primary care who wish to enhance their knowledge and skills in clinical preventive medicine and in the managerial aspects of health care. The M.P.H. degree or an equivalent academic experience is required for certification by the American Board of Preventive Medicine.

With approval, certain UCSD courses can be counted toward fulfilling the M.P.H. degree requirement at the SDSU Graduate School of Public Health.

Further information about these programs can be obtained from the Dean of Students, Maria Savoia, M.D., 858-534-3703 or Michael Criqui, M.D., 858-534-3723.

Section III. Other Programs

Preventive Medicine Residency Certificate

(Certificate 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 Wootten, M.D., M.P.H., Adjunct Associate Professor of Public Health

Public Health Certificate

The Advanced Certificate in Public Health offers individuals the opportunity to understand core public health principles, prepare for responsibilities or promotion in a public health setting, or offers an opportunity to determine if the Master of Public Health degree program is of interest to pursue. The advanced certificate also provides additional formal education in the public health field. Students who successfully complete the advanced certificate program can apply all 15 units to the Master of Public Health degree if admitted into the degree program in the Graduate School of Public Health.

Admission Requirements
Applicants must have earned a bachelor’s degree in biology, chemistry, health science, nursing, social work, or another health-related degree. A degree in a discipline not specifically mentioned must be approved by the Director of the Graduate School of Public Health. Applications may be submitted prior to entering the advanced certificate program or before the completion of nine semester units of coursework that is applicable to the advanced certificate in public health.

Contact the Graduate School of Public Health admissions coordinator or further information.

Course Requirements (15 units)

Students must complete the following courses with a grade of C (2.0) or better and a GPA of 3.0 or better.

- 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)

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, 619-543-6833 or Ann de Peyster, Ph.D., SDSU Graduate School of Public Health, 619-594-8690 for information on coursework offered at SDSU.
Public Health

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 practicums leading to both completion of a fellowship and a Master of Public Health degree.

The Division of Community Pediatrics at UCSD and the Graduate School of Public Health at SDSU have developed opportunities and experiences for medical students, residents, and practitioners in community practice to provide physicians a population-based understanding of disease and its determinants.

Further information about this program can be obtained from Philip R. Nader, M.D., 619-681-0688. For specific questions concerning the Masters in Public Health degree, contact the coordinator of Admissions and Student Affairs at 619-594-4492.

Macy Foundation/Synergistic Education in Public Health and Health Care

Philip R. Nader, M.D., Professor of Pediatrics, UCSD, Research Professor of Public Health

National Research Service Award Fellowship in Community Health

Philip R. Nader, M.D., Professor of Pediatrics, UCSD, Research Professor of Public Health

Family Medicine Faculty Development Program

Ellen L. Beck, M.D., Director of Community Education, Associate Clinical Professor of Epidemiology, UCSD

Fellowship in Applied Child Health Services

The Center for Child Health Outcomes at Children's Hospital is offering a one year fellowship in applied child health service research. The fellowship may be associated with the preventive medicine residency for fellows wishing Preventive Medicine Board Certification. Experiences will be developed through didactic courses or a practicum leading to both the completion of a fellowship and a Master of Public Health. Further information may be obtained by contacting Paul S. Kurtin at 858-576-4047. For specific questions concerning the Masters in Public Health degree, contact the coordinator of Admissions and Student Affairs at 619-594-4492.

Courses Acceptable on Master's and Doctoral Degree Programs (P H)

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

GRADUATE COURSES

P H 601. Epidemiology (3)
Prerequisite: Consent of instructor.
Distribution and determinants of diseases; role of epidemiology in public health. Descriptive, analytic and experimental epidemiology.

P H 602. Biostatistics (3)
Prerequisite: Consent of instructor.
Statistical reasoning applied to public health; probability, hypothesis testing, regression and correlation, analysis of variance, measurement theory and modeling.

P H 603. Behavioral and Social Science in Public Health (3)
Prerequisites: Psychology 316, 340, and Sociology 436.
Role of psychological, social and environmental variables in health and illness. Multifactorial psychosocial model of disease susceptibility.

P H 604. Environmental Determinants of Human Health (3)
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 indigent populations.

P H 627. Advanced Statistical Methods in Public Health (3)
Prerequisite: Public Health 627.
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)
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 indigent populations.

P H 635. Environmental Determinants of Human Health (3)
Environmental determinants and their influence on human health. Biological, physical, and chemical factors which affect the health of a community.

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 indigent populations.

P H 627. Advanced Statistical Methods in Public Health (3)
Prerequisite: Public Health 627.
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)
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 indigent populations.

P H 635. Environmental Determinants of Human Health (3)
Environmental determinants and their influence on human health. Biological, physical, and chemical factors which affect the health of a community.
P H 635. Environmental and Disaster Medicine (3)
  Environment, detection and control of intentional biological, chemical disasters, and nuclear threats.

P H 636. Hazardous Waste Management (3)
  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)
  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.
  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 644A. Health Services Organization Management (3)
  Prerequisite: Credit or concurrent registration in Public Health 641.
  Structure and functioning of organizations that provide and finance health services using a systems theory approach to visions/goals, strategies, structure, and processes. Functions of managers in health care organizations, focusing on interpersonal, informational, decision, ethical, and conflict resolution roles. (Formerly numbered Public Health 644.)

P H 644B. Managing High Performing Health Care Organization (3)
  Prerequisites: Public Health 641 and 644A.
  Applications of management theory to health care organizations. Organizational change for performance, behavior, quality management, law and ethics, human resource management, and information technology.

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 Promotion and Behavioral Science
E. Global Emergency Preparedness and Response
F. Required Community Practice

P H 661. Theoretical Foundations of Health Promotion (3)
  Prerequisite: Public Health 290.
  Psychological, sociological, economic, and political theories relevant to the mission and processes of health promotion. (Formerly numbered Community Health Education 621.)

P H 662. Motivating Health Behavior (3)
  Prerequisite: Public Health 303.
  Application of behavioral change techniques and health education methodology to health promotion targeting individuals and whole communities. (Formerly numbered Community Health Education 606.)

P H 663. Health Promotion Communications Theory and Design (3)
  Prerequisite: Public Health 402.
  Theory, design and implementation of health education communications in community contexts. Extensive use of student design, analysis, and projects.

P H 664. Health, Society and Human Behavior (3)
  Prerequisites: Psychology 101, Sociology 101.
  Historical and contemporary examination of health problems of individuals and communities. Health needs, resources; impact of society on health and health on society.

P H 666. Health Promotion Program Planning and Assessment (3)
  Prerequisites: Public Health 661, 662.
  Program planning and assessment, theories, systems and procedures relevant to health promotion and education.

P H 667. Prevention and Control of Chronic Diseases (3)
  Prerequisites: Public Health 601 and 602.
  Health promotion strategies for modification of individual behaviors and social practices to lower risk of chronic disease.

P H 668. Seminar in Health Promotion Research (3)
  Prerequisite: Graduate standing in public health.
  Philosophical, ethical and methodological issues in current health promotion research and services.

P H 669. Health Risk Appraisal (3)
  Prerequisites: Public Health 601, 602, 661, 662.
  Techniques available for identifying personal health risk. Use of these methods for inducing change. Evaluation of effectiveness of methodologies.

P H 682. Geographic Information Systems and Public Health Spatial Analysis (3)
  Two lectures and two hours of activity.
  Prerequisites: Public Health 601 and 602.
  Theoretical concepts of geographic information systems (GIS) and applications of GIS in public health. ArcGIS 9 software to illustrate the capabilities and uses of GIS in both academic research and regulatory decision making.

P H 696. Contemporary Topics in Public Health (1-3)
  Intensive study in specific areas of public health and health services administration. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.
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 Emergency Preparedness and Response

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 725. Scientific Writing for Epidemiology (3) Cr/NC
Prerequisite: Completion of one year of master’s level coursework in epidemiology or biometry.
Prepares students to generate a feasible hypothesis, perform, organize and write a literature review, and summarize proposed methodology. Topics include research development and organization, finding data sources, principles of scientific writing and revising, plagiarism, and citation management.

PH 726. HIV/AIDS Epidemiology and Public Health (3)
Prerequisites: Public Health 601. Recommended: Public Health 621.
State-of-the-art review of HIV and AIDS within a public health framework. Biology, transmission, host susceptibility, screening and surveillance, domestic and international epidemiology, study design, intervention, and options for prevention (including community-based trials).

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)
Prerequisites: Public Health 641 and 644A.
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 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 644B.
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: nine units of Public Health 750 applicable to a master’s degree.

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.

PH 784. Global Environmental Health (3)
Environmental causes of morbidity and mortality worldwide and strategies to reduce incidence. Regional differences due to anthropogenic and naturally occurring disease agents interacting with differential population susceptibility to disease. Measurement tools for environmental health research in less developed areas of the world.
P H 797. Research (1-3) Cr/NC/RP  
Prerequisite: Consent of instructor.  
Research in one of the fields of public health. Maximum credit six units applicable to a master’s degree. Maximum combined credit six units of Public Health 797 and 798 applicable to a master’s degree.

P H 798. Special Study (1-6) Cr/NC/RP  
Prerequisite: Consent of staff, to be arranged with the director and instructor.  
Individual study. Maximum credit six units applicable to a master’s degree. Maximum combined credit six units of Public Health 797 and 798 applicable to a master’s degree.

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

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

P H 799C. Comprehensive Examination Extension (0) Cr/NC  
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. Methodological 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)  
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 850. Global Health Practicum (3)  
Prerequisites: Public Health 781, 800, 880.  
An international research activity, program evaluation, participation in a multinational organization internship, or field work with government or non-governmental organizations. This practicum is required for completion of the Ph.D. in global health under supervision of program directors.

P H 851. Behavioral Measurement (3)  
Prerequisites: Prior registration in Thesis 799A with an assigned grade symbol of RP.  
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 861. Advanced Theoretical Foundations of Health Behavior Research and Applications (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 862. Advanced Communication Technology as Applied to Health Behavioral Interventions (3)  
Prerequisites: Public Health 663, admission to the doctoral program, and consent of instructor.  
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 863. Advanced Theoretical Foundations of Health Behavior Researchers (3)  
Prerequisite: Admission to Ph.D. in public health with a concentration in health behavioral science.  
Skills needed to compete for health behavior research funding. Grant proposal writing, submission, review, and revision processes. Background information about grant review procedures and funding mechanisms, with emphasis on national institutes of health.

P H 880. Seminar: Program Planning and Evaluation in International Settings (3)  
Prerequisite: Public Health 720.  
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 887. Doctoral Research (1-15) Cr/NC/RP  
Prerequisite: Admission to the doctoral program.  
Independent investigation in the general field of the dissertation.  
Individual study in the field of specialization. Maximum credit nine units applicable to the doctoral degree.

P H 899. Doctoral Dissertation (3-15) Cr/NC/RP  
Prerequisites: Admission to the doctoral program.  
Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.
Regulatory Affairs

In the College of Sciences

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TELEPHONE: 619-594-6030 / FAX: 619-594-6381
E-MAIL: regsci@mail.sdsu.edu
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Graduate Adviser: Catherine J. Atkins, Ph.D.

General Information

Regulatory science programs focus on training students in areas related to development, manufacturing, and marketing of biopharmaceutical, pharmaceutical, and medical device products. Programs address 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 fully online through special sessions with enrollment 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://regsci.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 (FDA) and international counterparts. Upon successful completion of the degree program, students will have detailed knowledge and understanding of current regulations with an understanding for their practical application to the development and commercialization of drug, biologic, and medical device products.

Master of Science Degree in Regulatory Affairs

(Offered through the College of Extended Studies)

The Master of Science degree in regulatory affairs is offered through the College of Sciences. 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 regulatory affairs program adviser. This degree program provides a comprehensive background in regulatory science with the additional training and experience required of regulatory affairs professionals to address federal, state, and international regulatory statutes and laws. The degree offering focuses on laws and regulations imposed by regulatory agencies 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.

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 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 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).

Regulatory Affairs Department

The following materials should be mailed or delivered to:

Master of Science in Regulatory Affairs
Director of Regulatory Affairs Programs
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-1010

(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) Resume or curriculum vita listing employment or volunteer experience relevant to the proposed new degree major program;

(4) One set of official transcripts (in addition to those sent to Graduate Admissions).

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 30 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 773 Medical Device Regulations (3)
   - OR
     - R A 774 Investigational and Marketing Applications for Drugs and Biologics (3)
     - R A 779 International Regulatory Affairs (3)
     - R A 781 Ethics for Healthcare Professionals (3)
     - R A 783 Effective Communication for Healthcare Professionals (3)

2. Complete six 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 772 Post-Approval Activities (3)
   - R A 773 Medical Device Regulations (3)
   - OR
     - R A 774 Investigational and Marketing Applications for Drugs and Biologics (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: Pharmaceuticals, Biologics, and Medical Devices (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 complete three units of Regulatory Affairs 798 in lieu of Regulatory Affairs 799A.

Advanced Certificate in Regulatory Affairs
(Offered through the College of Extended Studies)
(Certificate 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. Courses in the Advanced Certificate in Regulatory Affairs may be applied to the Master of Science degree in regulatory affairs. To enroll in this certificate program, call 619-594-6030.

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 772. Post-Approval Activities (3)
Prerequisite: Regulatory Affairs 602.
FDA and FTC rules and regulations governing advertising, promotion, and labeling for prescription drugs, biologics, medical devices, and over-the-counter drugs.
R A 773. Medical Device Regulations (3)
Prerequisite: Regulatory Affairs 602.
Laws and FDA regulations for medical devices, in vitro diagnostics, radiological devices, FDA jurisdiction, registration, listing labeling requirements, classification, Investigational Device Exemptions (IDE), premarket approval (PMA) and premarket notification (510(k)). Not a repeatable course. Maximum combined credit six units of Regulatory Affairs 773 and 774 applicable to a master's degree.

R A 774. Investigational and Marketing Applications for Drugs and Biologics (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. Not a repeatable course. Maximum combined credit six units of Regulatory Affairs 773 and 774 applicable to a master's degree.

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: Consent of staff; to be arranged with program director/graduate adviser and instructor.
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
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

NOTE: Courses for Area (A) Texts; or Area (B) Traditions; or Area (C) Theories and Methods; or Area (D) Critical Issues in Religion, are identified in the course title as (A), (B), (C), or (D).

REL S 507. The Reformation (A) (B) (C) (D) (3)
Continental Europe, 1500-1648. Split of Christendom; political and intellectual dissent; social fabric of family life; relationship between gender, class, and power; cultural stratification of European society.

REL S 580. Major Figure (A) (B) (C) (D) (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 (A) (B) (C) (D) (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 (A) (B) (C) (D) (1-3)
Prerequisite: 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 (A) (B) (C) (D) (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 (A) (B) (C) (D) (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. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

REL S 798. Special Study (1-3) Cr/NC/RP
Prerequisites: Twelve upper division units in religious studies and consent of staff; to be arranged with department chair and instructor. Individual study. Maximum credit six units applicable to a master’s degree.
Rhetoric and Writing Studies
In the College of Arts and Letters

OFFICE: Adams Humanities 3138
TELEPHONE: 619-594-6515 / FAX: 619-594-6530

Faculty
Glen Mcclish, Ph.D., Professor of Rhetoric and Writing Studies, Chair of Department
Cezar M. Ornatowski, Ph.D., Professor of Rhetoric and Writing Studies
Linn K. Bekins, Ph.D., Associate Professor of Rhetoric and Writing Studies
Suzanne Bordelon, Ph.D., Associate Professor of Rhetoric and Writing Studies
Richard B. Boyd, Ph.D., Associate Professor of Rhetoric and Writing Studies
Ellen Quandahl, Ph.D., Associate Professor of Rhetoric and Writing Studies
E. Jane Robinett, Ph.D., Associate Professor of Rhetoric and Writing Studies
Christopher Werry, Ph.D., Associate Professor of Rhetoric and Writing Studies
Paul A. Minifie, Ph.D., Assistant Professor of Rhetoric and Writing Studies

Associateships
Graduate teaching associateships (GTA) in rhetoric and writing studies are available to a limited number of qualified graduate students. Teaching associates must have completed Rhetoric and Writing Studies 609, attend Rhetoric and Writing Studies 796A during the first semester of their associateship, and have the consent of the RWS GTA program director. Application forms and additional information are available from the Department of Rhetoric and Writing Studies.

General Information
The Department of Rhetoric and Writing Studies, in the College of Arts and Letters, offers graduate study leading to the Master of Arts degree in rhetoric and writing studies. Rhetoric and composition is a field of theory, research, and teaching concerned broadly with literacy and written discourse. It emphasizes the centrality of discourse (primarily written discourse) to all processes of learning, knowledge formation, socialization into disciplinary and cultural communities, and professional work. The program builds on the diverse interests of faculty in the Department of Rhetoric and Writing Studies to bring together rhetorical theory, history of rhetoric, composition studies, literacy, writing pedagogy, discourse theory, professional writing, and writing in the disciplines to provide a coherent platform for inquiry into the diverse ways in which literacy and writing are used in academic, professional, and cultural contexts. The graduate program can prepare students for a teaching career.

The Master of Arts degree in rhetoric and writing studies is a 30-unit program that provides preparation for students wanting to pursue doctoral-level study in the area of rhetoric and writing studies or in related disciplines or for students who plan to terminate their studies at the M.A. level. In addition to a general program, the curriculum 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;
(2) GRE scores (http://www.ets.org, SDSU institution code 4682);
(3) English language score, if medium of instruction was in a language other than English (http://www.ets.org, SDSU institution code 4682);

Department of Rhetoric and Writing Studies
The following materials should be mailed or delivered to:
Department of Rhetoric and Writing Studies
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-4452

(1) Letter of application;
(2) A 750-1000 word statement of purpose;
(3) A writing sample (minimum 10 pages total, in one or separate documents);
(4) Three letters of recommendation.

Advancement to Candidacy
All students must satisfy the general requirements for advancement to candidacy, including the foreign language requirement, as stated in Part Four of this bulletin. With the approval of the graduate adviser, each candidate may fulfill the foreign language requirement in one of several ways: 1) by passing a local examination administered by one of the university’s foreign language departments, 2) by completing one three-unit upper division foreign language or literature course with a grade of C or better, or 3) by passing an examination to be determined by the graduate adviser if the chosen language is not one taught in a department at San Diego State University.
Specific Requirements for the Master of Arts Degree
(Major Code: 15013)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Four of this bulletin, a student must complete a program of study approved by the department's graduate adviser. The program must consist of at least 30 units, with at least 18 units of 600- and 700-level courses.

General Program
(SIMS Code: 112201)

Required courses (15 units):
- RWS 600 Reading and Writing Rhetorically (3)
- RWS 601A History of Rhetoric I (3)
- RWS 602 Modern Rhetoric and Composition Studies (3)
- RWS 640 Research Methods in Rhetoric and Writing Studies (3)
- RWS 790 M. A. Examination Preparation (3) Cr/NC
  or
- RWS 799A Thesis or Project (3) Cr/NC/RP

Electives (15 units)
Fifteen units of thematically focused electives selected with the approval of the Department of Rhetoric and Writing Studies graduate adviser.

Specialization in the Teaching of Writing
(SIMS Code: 112202)

Required courses (21 units):
- RWS 600 Reading and Writing Rhetorically (3)
- RWS 601A History of Rhetoric I (3)
- RWS 602 Modern Rhetoric and Composition Studies (3)
- RWS 609 Theory and Practice of Teaching Composition (3)
- RWS 640 Research Methods in Rhetoric and Writing Studies (3)
- RWS 796A Teaching Internship (3) Cr/NC
  or
- RWS 798 Special Study (based on work experience, where appropriate and with the approval of the Department of Rhetoric and Writing Studies graduate adviser) (3) Cr/NC/RP
- RWS 790 M. A. Examination Preparation (3) Cr/NC
  or
- RWS 799A Thesis or Project (3) Cr/NC/RP

Electives (9 units)
Nine units of thematically focused electives selected with the approval of the Department of Rhetoric and Writing Studies graduate adviser.

Specialization in Professional Writing
(SIMS Code: 112203)

Required courses (24 units):
- RWS 504 Advanced Professional Writing (3)
- RWS 505 Writing Project Management (3)
- RWS 600 Reading and Writing Rhetorically (3)
- RWS 601A History of Rhetoric I (3)
- RWS 602 Modern Rhetoric and Composition Studies (3)
- RWS 640 Research Methods in Rhetoric and Writing Studies (3)
- RWS 796B Writing Internship (3)
  or
- RWS 798 Special Study (3) Cr/NC/RP (Based on work experience, where appropriate and with the approval of the Department of Rhetoric and Writing Studies graduate adviser)
- RWS 790 M. A. Examination Preparation (3) Cr/NC
  or
- RWS 799A Thesis or Project (3) Cr/NC/RP

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
(Certificate Code: 90101) (SIMS Code: 112299)

Offered by the Department of Rhetoric and Writing Studies, the Advanced Certificate in the Teaching of Writing provides opportunities for teachers, scholars, and other professionals to expand their knowledge of rhetoric, expository texts, and composition instruction. Applicants to the program must have completed a bachelor's degree from an accredited institution.

Students in the program must complete 12 units of coursework. A minimum grade point average of 3.0 or better must be maintained in certificate coursework, with no less than a C grade in any course.

Required courses (6 units):
- RWS 600 Reading and Writing Rhetorically (3)
- RWS 609 Theory and Practice of Teaching Composition (3)

Electives (6 units)
Three units selected from:
- LING 530 English Grammar (3)
- LING 550 Theory and Practice of English as a Second Language (3)
- LING 652 Second Language Acquisition (3)
- LING 653 ESL Reading and Writing (3)

Three units selected from:
- RWS 601A History of Rhetoric I (3)
- RWS 601B History of Rhetoric II (3)
- RWS 602 Modern Rhetoric and Composition Studies (3)
- RWS 640 Research Methods in Rhetoric and Writing Studies (3)

The certificate adviser in the Department of Rhetoric and Writing Studies is responsible for evaluating applications and advising students.

Up to 12 units of coursework taken as part of the certificate program, with the approval of the graduate adviser, may be applied to the Master of Arts degree in rhetoric and writing studies with a specialization in the teaching of writing.

Courses Acceptable on Master's Degree Program in Rhetoric and Writing Studies
(RWS)

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

UPPER DIVISION COURSES

RWS 500W. Advanced Writing Strategies (3)
Prerequisites: Satisfies Graduation Writing Assessment Requirement for students who have completed 60 units; completed Writing Placement Assessment with a score of 8 or higher (or earned a C or higher in RWS 280, 281, or LING 281 if score on WPA was 7 or lower); and completed General Education requirements in Composition and Critical Thinking. Proof of completion of prerequisites required: Test scores or verification of exemption; copy of transcript. Advanced writing course focusing on how meaning is negotiated and claims are argued in academic and public discourse.

RWS 501. Editing (3)
Prerequisite: Rhetoric and Writing Studies 305W or 500W. Fundamentals of professional editing. Functions of an editor. Document development, style, and style guides. Editing tools and technologies. Preparing text for publication and production.

RWS 503W. Professional Writing (3)
Prerequisite: Rhetoric and Writing Studies 305W or 500W. Principles and practices of professional writing, including clear and concise style and rhetorical strategies of designing effective workplace documents. Practice composing memos, reports, proposals.
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.

RWS 506. Writing Internship (3) Cr/NC
Prerequisites: Rhetoric and Writing Studies 504 and Rhetoric and Writing Studies 503W or 508W.
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 LINQ 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.
Scientific writing in academic and research settings to include clear and concise writing style, rhetorical strategies, and writing of research reports, proposals, conference presentations, and articles. (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 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. How these works informed pedagogy and public life. Relationship of historical texts to contemporary rhetorical practices. Not open to students who have taken Rhetoric and Writing Studies 601.

RWS 602. Modern Rhetoric and Composition Studies (3)
Twentieth century rhetoric and composition theory, and their relationship to study and teaching of written discourse. Placement Assessment with a score of 8 or higher (or earned a C or higher in RWS 280, 281, or LINQ 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.

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 730. Gender and Rhetoric (3)
Prerequisites: Rhetoric and Writing Studies 600 and 601A. Explores intersection of gender, rhetoric, and power. Topics include rhetoric and the body, gendered differences in rhetorical styles, roles gender plays in professional relationships, culture, and the media. Interrogation of gender as an analytical category.

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
Susan L. Woodruff, Ph.D., Professor of Social Work
David W. Engstrom, Ph.D., Associate Professor of Social Work
Sally G. Mathiesen, Ph.D., Associate Professor of Social Work
Jong Won Min, Ph.D., Associate Professor of Social Work
Thomas R. Packard, D.S.W., Associate Professor of Social Work
Lucinda A. Rasmussen, Ph.D., Associate Professor of Social Work
  (Graduate Adviser)
Mark B. Reed, 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

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

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

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

Master of Social Work Degree
The following materials should be mailed or delivered to:
  School of Social Work
  (Attention: Graduate Adviser)
  San Diego State University
  5500 Campanile Drive
  San Diego, CA 92182-4452

(1) Departmental application available at:
  http://socialwork.sdsu.edu/applying.php;
(2) Letters of recommendation;
(3) Personal statement.

Master of Social Work Degree and Juris Doctor Degree
The following materials should be mailed or delivered to:
  School of Social Work
  (Attention: Graduate Adviser)
  San Diego State University
  5500 Campanile Drive
  San Diego, CA 92182-4452

(1) Departmental application available at:
  http://socialwork.sdsu.edu/applying.php;
(2) Letters of recommendation;
(3) Personal statement;
(4) Contact the Office of Admissions at California Western School of Law at 619-625-1463 for a separate application.

Master of Social Work Degree and
Master of Public Health Degree
The following materials should be mailed or delivered to:
  School of Social Work
  (Attention: Graduate Adviser)
  San Diego State University
  5500 Campanile Drive
  San Diego, CA 92182-4119

(1) Submit a narrative statement as described in Instructions for Applicants;
(2) Submit three letters of recommendation.

Master of Social Work Degree

General Information
The School of Social Work offers a 38-60 unit year accredited graduate program leading to a Master of Social Work (MSW) degree. Coursework is typically completed in one to four years. The program qualifies students to apply for the Licensed Clinical Social Worker (LCSW) certification process by the Board of Behavioral Science Examiners of the State of California.
Students may earn the Master of Social Work degree in one of two ways described below. Students who have earned an undergraduate social work degree from an accredited university may be eligible to complete the requirements for the Master of Social Work degree via the 38 unit advanced standing program. All other students are required to complete the standard 60 units Master of Social Work program.
The goal of the Master of Social Work degree is to prepare advanced practitioners who: are prepared to be leaders in the profession; who have multiple skills that can be used in a wide variety of settings and with systems of various sizes; who are well-grounded in the values and ethics of the profession; who are committed to social and economic justice; who utilize research evidence in practice decision making; who understand and can respond to the dynamic nature of the social contexts of practice; and who are committed to lifelong professional development. Special emphasis is currently given to those human needs that relate to the continuum of health care and well-being, families in transition, and social/environmental factors that create stress as it relates to individuals and groups in the home, workplace, and community.
The school is extensively involved in local, state, and national human service issues through individual faculty research and community intervention programs. In addition, the school has made commitments in the area of chemical dependency research and practice through the Center for Alcohol and Other Drug Studies and policy research and intervention through the Social Policy Institute.
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://chhs.sdsu.edu/sw.

Please be advised that the school does not accept life/work experience in lieu of any course requirements. The school does not accept transfer credit based on life/work experience. Students will have to re-take 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 of 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 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 their desired 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 from one of the following social work methods focus areas (Administration and Community Development or Direct Practice):

   Administration and Community Development
   (Major Code: 21041) (SIMS Code: 558210)

   SWORK 720 Seminar in Selected Topics in Human Behavior and Social Environment (3)
   SWORK 740 Advanced Seminar in Administration and Community Development in Social Work and Gerontology (3)
   SWORK 755 Advanced Field Practicum: Social Work Administration and Community Development (4) Cr/NC/RP (Taken twice)

   Direct Practice
   (Major Code: 21041) (SIMS Code: 558207)

   SWORK 739 Advanced Seminar in Social Work Practice with Families (3)
   SWORK 744 Advanced Seminar in Selected Topics in Direct Practice Social Work (3)
   SWORK 750 Advanced Field Practicum: Direct Practice Social Work (4) Cr/NC/RP (Taken twice)

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 or 63 Unit Master of Social Work Program with Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRSIS) Certificate

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 (63 units for EC-SEBRSIS focus) 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 (or 32 units for EC-SEBRIS focus), to include:
   a. 0-6 units of advanced human behavior (SWORK 720); or (CFD 670 and 671 for EC-SEBRIS focus);
   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), or (CSP 623 and SPED 676 for EC-SEBRIS focus);
   e. 14 units from one of the following social work methods focus areas (Administration and Community Development or Direct Practice or Direct Practice/EC-SEBRIS):
      - Administration and Community Development (Major Code: 21041) (SIMS Code: 558211)
      - SWORK 720 Seminar in Selected Topics in Human Behavior and Social Environment (3)
      - SWORK 740 Advanced Seminar in Administration and Community Development in Social Work and Gerontology (3)
      - SWORK 755 Advanced Field Practicum: Social Work Administration and Community Development (4) Cr/NC/RP (Taken twice)
      - Direct Practice (Major Code: 21041) (SIMS Code: 558205)
      - SWORK 739 Advanced Seminar in Social Work Practice with Families (3)
      - SWORK 744 Advanced Seminar in Selected Topics in Direct Practice Social Work (3)
      - SWORK 750 Advanced Field Practicum: Direct Practice Social Work (4) Cr/NC/RP (Taken twice)
      - Direct Practice/EC-SEBRIS (Major Code: 21041) (SIMS Code: 558212)
      - SWORK 739 Advanced Seminar in Social Work Practice with Families (3)
      - SWORK 744 Advanced Seminar in Selected Topics in Direct Practice Social Work (3)
      - SWORK 798 Special Study (2) Cr/NC/RP
      - CFD 697 Advanced Field Experiences (6) Cr/NC

In addition to the above courses, students must complete either a Thesis (Plan A) or a comprehensive written examination (Plan B). To receive the degree, students must earn a 3.0 (B) grade point average in academic courses and demonstrate professional competence for required practicum (Cr for all semesters).

In addition, the National Association of Social Workers (NASW) Code of Ethics represents the professional standards of the MSW program. The NASW Code of Ethics is available in the student handbook. All students are expected to know and adhere to its principles of professional conduct. Students who knowingly or unknowingly violate any part of the ethical code may be dismissed from the program without further qualification regardless of coursework, research, or other academic achievement.

Student Handbook

The School of Social Work has a student handbook for graduate students containing policies and procedures not specified in this bulletin in addition to information to aid students in completing the MSW degree program. Students are responsible for the handbook on the Social Work homepage http://chhs.sdsu.edu/sw.

Program of Study

Advanced Standing Program

The first nine units of the advanced standing program taken during the summer semester are organized around the generalist/foundation of social work practice. The final 29 units commencing in the fall are organized around a methods focus area. Students will select one of the methods focus areas.

Standard 60 Unit Master of Social Work Program or 63 Unit Master of Social Work Program with Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRIS) Certificate

The standard 60 unit Master of Social Work program or 63 unit Master of Social Work program with Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist (EC-SEBRIS) certificate 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.

Direct Practice Social Work/Early Childhood-Socio-Emotional and Behavior Regulation Intervention Specialist

This focus area prepares MSW students to work with young children (ages 0-5) in the mental health field. In addition to the MSW, this focus area meets the requirements of the EC-SEBRIS certificate that models the California Infant and Early Childhood Mental Health Training Guidelines and Personnel Competencies. Like the Direct Practice focus, emphasis is placed on a problem-solving framework that utilizes assessment/diagnosis, intervention/treatment, and evaluative skills.

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: 21046) (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)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWORK 61</td>
<td>Seminar in Social Welfare Policy and Services</td>
<td>(3)</td>
</tr>
<tr>
<td>SWORK 619</td>
<td>Human Behavior in the Social Environment</td>
<td>(3)</td>
</tr>
<tr>
<td>SWORK 620A</td>
<td>Seminar in Human Behavior and Social Environment: Direct Practice</td>
<td>(3)</td>
</tr>
<tr>
<td>SWORK 630</td>
<td>Social Work Practice: A Generalist Perspective</td>
<td>(3)</td>
</tr>
<tr>
<td>SWORK 631</td>
<td>Social Work Practice: Individuals, Families, and Groups</td>
<td>(3)</td>
</tr>
<tr>
<td>SWORK 632</td>
<td>Social Work and Gerontology: Organizations and Communities</td>
<td>(3)</td>
</tr>
<tr>
<td>SWORK 650</td>
<td>Field Practicum</td>
<td>(7) Cr/NC</td>
</tr>
<tr>
<td>SWORK 690</td>
<td>Seminar in Research Methods for Social Work and Gerontology</td>
<td>(3)</td>
</tr>
<tr>
<td>SWORK 702</td>
<td>Seminar in Selected Social Welfare Policy and Services</td>
<td>(3)</td>
</tr>
<tr>
<td>SWORK 720</td>
<td>Seminar in Selected Topics in Human Behavior and Social Environment</td>
<td>(3)</td>
</tr>
<tr>
<td>SWORK 797</td>
<td>Research (3) Cr/NC/ RP</td>
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</tr>
</tbody>
</table>

In addition to the above courses, students must complete one of the following:

Plan A:
- Thesis: SWORK 799A (3) Cr/NC/RP

Plan B:
- Comprehensive Written Capstone Examination: SWORK 798 (3) Cr/NC/RP
- Electives: Six units transferred from California Western School of Law courses and six units in a second year practice concentration.

California Western School of Law
(89 Units–Including 12 units transferred from the School of Social Work)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWORK 739</td>
<td></td>
<td>(3)</td>
</tr>
<tr>
<td>SWORK 744</td>
<td></td>
<td>(3)</td>
</tr>
<tr>
<td>SWORK 750</td>
<td></td>
<td>(6)</td>
</tr>
</tbody>
</table>

California Western School of Law offers a four-year concurrent graduate program leading to a Juris Doctor (JD) degree in law. 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: 998220)

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 93 units as outlined below.

**Social Work/Public Health-Health Management and Policy (SIMS Code: 988220)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>CR/NC/RP</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWORK 601</td>
<td>Seminar in Social Welfare Policy and Services (3)</td>
<td></td>
<td>Cr/NC/RP</td>
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<tr>
<td>SWORK 619</td>
<td>Seminar in Human Behavior and Social Environment: Direct Practice (5)</td>
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<td>Cr/NC/RP</td>
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</tr>
<tr>
<td>SWORK 620A</td>
<td>Seminar in Human Behavior and Social Environment: Direct Practice (5)</td>
<td></td>
<td>Cr/NC/RP</td>
<td></td>
</tr>
<tr>
<td>SWORK 630</td>
<td>Social Work Practice: A Generalist Perspective (3)</td>
<td></td>
<td>Cr/NC/RP</td>
<td></td>
</tr>
<tr>
<td>SWORK 631</td>
<td>Social Work Practice: Individuals, Families, and Groups (3)</td>
<td></td>
<td>Cr/NC/RP</td>
<td></td>
</tr>
<tr>
<td>SWORK 632</td>
<td>Social Work and Gerontology: Organizations and Communities (3)</td>
<td></td>
<td>Cr/NC/RP</td>
<td></td>
</tr>
<tr>
<td>SWORK 650*</td>
<td>Field Practicum (7) Cr/NC</td>
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<tr>
<td>SWORK 690</td>
<td>Seminar in Research Methods for Social Work and Gerontology (3)</td>
<td></td>
<td>Cr/NC/RP</td>
<td></td>
</tr>
<tr>
<td>SWORK 740</td>
<td>Advanced Seminar in Administration and Community Development in Social Work and Gerontology (3)</td>
<td></td>
<td>Cr/NC/RP</td>
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</tr>
<tr>
<td>SWORK 745</td>
<td>Advanced Seminar in Selected Topics in Social Work Administration (3)</td>
<td></td>
<td>Cr/NC/RP</td>
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</tr>
<tr>
<td>SWORK 755*</td>
<td>Advanced Field Practicum: Social Work Administration and Community Development (8) Cr/NC/RP</td>
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<tr>
<td>SWORK 797</td>
<td>Research (3) Cr/NC/RP</td>
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<tr>
<td>P H 601</td>
<td>Epidemiology (3)</td>
<td></td>
<td>Cr/NC/RP</td>
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<td>P H 602</td>
<td>Biostatistics (3)</td>
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<td>Cr/NC/RP</td>
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<td>P H 604</td>
<td>Environmental Determinants of Human Health (3)</td>
<td></td>
<td>Cr/NC/RP</td>
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<tr>
<td>P H 641</td>
<td>Introduction to Health Services (3)</td>
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<td>Cr/NC/RP</td>
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<tr>
<td>P H 644A</td>
<td>Health Services Organization Management (3)</td>
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<td>Cr/NC/RP</td>
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<tr>
<td>P H 644B</td>
<td>Managing High-Performing Health Care Organization (3)</td>
<td></td>
<td>Cr/NC/RP</td>
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<tr>
<td>P H 645</td>
<td>Health Economics (3)</td>
<td></td>
<td>Cr/NC/RP</td>
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<tr>
<td>P H 647</td>
<td>Quantitative Methods and Health Data Analysis (3)</td>
<td></td>
<td>Cr/NC/RP</td>
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<tr>
<td>P H 648</td>
<td>Health Policy (3)</td>
<td></td>
<td>Cr/NC/RP</td>
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<tr>
<td>P H 742A</td>
<td>Health Services Financial Management (3)</td>
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<td>Cr/NC/RP</td>
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<tr>
<td>P H 742B</td>
<td>Health Insurance and Financing Systems (3)</td>
<td></td>
<td>Cr/NC/RP</td>
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<tr>
<td>P H 747</td>
<td>Quality Improvement and Program Evaluation (3)</td>
<td></td>
<td>Cr/NC/RP</td>
<td></td>
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<tr>
<td>P H 748</td>
<td>Health Services Competitive Strategy and Marketing (3)</td>
<td></td>
<td>Cr/NC/RP</td>
<td></td>
</tr>
<tr>
<td>P H 797</td>
<td>Research (3) Cr/NC/RP</td>
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<td></td>
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<tr>
<td>P H 799A or</td>
<td>Thesis (3) Cr/NC/RP</td>
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<tr>
<td>SWORK 799A</td>
<td>Thesis (3) Cr/NC/RP</td>
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<tr>
<td>Electives:</td>
<td>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.</td>
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* 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.

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**Certificate in Social Work Administration**

(Certificate 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:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>CR/NC/RP</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWORK 740</td>
<td>Advanced Seminar in Administration and Community Development in Social Work and Gerontology (3)</td>
<td></td>
<td>Cr/NC/RP</td>
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</tr>
<tr>
<td>SWORK 745</td>
<td>Advanced Seminar in Selected Topics in Social Work Administration (3)</td>
<td></td>
<td>Cr/NC/RP</td>
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</tr>
<tr>
<td>SWORK 758</td>
<td>Seminar in Social Work and Selected Fields of Practice: Information Systems and Knowledge Management (3)</td>
<td></td>
<td>Cr/NC/RP</td>
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</tbody>
</table>

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 advisor.

For further information, contact the program adviser, Dr. Thomas R. Packard, School of Social Work, packard@mail.sdsu.edu or 619-594-6723.

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**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 Social Work and the Pupil Personnel Services Credential in Child Welfare and Attendance. The credentials can be awarded under two conditions:

1. As part of the regular MSW program being completed during the second year coursework. Students would be assigned to a second-year SWORK 750 internship in an approved and supervised school placement. In addition, students must take SWORK 758 (School Social Work) as their fall elective course, and SWORK 758 (Practice in the Educational Arena) as their spring elective course.
2. As a post MSW student through the College of Extended Studies. Interested professionals must contact the PPS coordinator and apply for the program which consists of 14 units taken over two semesters beginning in the fall of each year. The program includes SWORK 758 (School Social Work—3 units), SWORK 758 (Practice in the Educational Arena—3 units), and SWORK 750 (4 units) each semester. SWORK 750 is a 20-hour per week internship required to accumulate the necessary time for the credentials.

**Admission**

Current students interested in the PPS credential need only file the regular SWORK 750 application during the spring semester prior to enrollment. Unless demand is high, students will generally be admitted to the credential program.

Post MSW students must obtain the information packet for SWORK 750 in February of the year they wish to begin the program. Post MSW students must then file the necessary application to the coordinator of Field Education by the deadline date established for all students. In entering the program, admission is based upon available internship sites. Preference is given to current students. Official acceptance does not occur until late spring when all current students have been placed. For further information contact Dr. Daniel J. Finnegan, PPS Coordinator, 619-594-6850, or email: dfmenga@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 Practice for Social Work and Gerontology (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.

SWORK 630. Social Work Practice: A Generalist Perspective (3)
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 and Gerontology: 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 Research Methods for Social Work and Gerontology (3)
(Same course as Gerontology 690)
Research development, design, and methodology. Application to social work and gerontology in testing theories, advancing practice knowledge, and decision-making.

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

SWORK 702. Seminar in Selected Social Welfare Policy and Services (3)
Prerequisite: Social Work 601.
Selected social welfare policies used to examine processes of policy formulation, policy analysis skills, and relationships of policy decisions and indecisions to outcomes of social welfare interventions. Maximum credit six units applicable to a master’s degree.

SWORK 720. Seminar in Selected Topics in Human Behavior and Social Environment (3)
Prerequisite: Social Work 620A.
Selected topics related to current theories of natural and induced change in human behavior which have utility for social work practice within fields of service. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to a master’s degree.

SWORK 739. Advanced Seminar in Social Work Practice with Families (3)
Prerequisites: Social Work 744 and concurrent registration in Social Work 750.
Family dynamics and social work practice related to family change.

SWORK 740. Advanced Seminar in Administration and Community Development in Social Work and Gerontology (3)
(Same course as Gerontology 740)
Prerequisites: Social Work 632 and concurrent registration in Gerontology 700A or Social Work 755.
Human services program design, strategic planning, marketing, organizational performance management, human resource management, and development of grant proposals.

SWORK 744. Advanced Seminar in Selected Topics in Direct Practice Social Work (3)
Prerequisites: Social Work 631, 632, and concurrent registration in Social Work 750.
Study of a selected aspect of direct practice social work. Topics include treatment methodology, theoretical approaches, levels of practice, specific client groups, or special problem areas. See Class Schedule for specific content.

SWORK 745. Advanced Seminar in Selected Topics in Social Work Administration (3)
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. Maximum credit eight units applicable to a master's degree.

SWORK 755. Advanced Field Practicum: Social Work Administration and Community Development (4) Cr/NC/RP
Prerequisites: Social Work 650 and concurrent registration in Social Work 720 or Social Work 740 and 745.
Advanced field instruction in public or voluntary social work setting. Eight units required. Continuation and intensification of experiences in application of social work objectives, principles and skills in service organizations and communities. Maximum credit eight units applicable to a master's degree.

SWORK 758. Seminar in Social Work and Selected Fields of Practice (1-3)
Traditional and emerging fields of practice and related social work responsibilities and roles. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

SWORK 780. Seminar in Social Work and Selected Populations-at-Risk (3)
Social work practice with selected populations-at-risk such as one-parent families, children in institutions, ethnic minority immigrants, Native-Americans in the urban scene, and foreign-born brides of U.S. servicemen. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to a master’s degree.

SWORK 781. Seminar on Selected Populations-at-Risk (3)
Knowledge about and analysis of selected populations-at-risk, social work responsibilities in emerging service demands by diverse and needful, high risk segments of the population in a complex society, and implications for social work practice. Population-at-risk for study to be announced in Class Schedule. May be repeated with new content. Maximum credit six units applicable to a master’s degree.

SWORK 791. Applied Social Work Practice Research Seminar (3)
Prerequisite: Social Work 690.
Preparation for practitioner-researcher role through application of social work research concepts and procedures in practice situations (in class and field) of social work interventions. Maximum credit six units applicable to a master’s degree.

SWORK 797. Research (3) Cr/NC/RP
Prerequisite: Consent of Instructor.
Research in one of the areas of social work. Maximum credit three units applicable to a master’s degree.

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

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

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

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

OFFICE: Adams Humanities 4231
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
Henry E. Johnston, 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
Enrico A. Marcelli, Ph.D., Associate Professor of Sociology
Michael A. McCall, Ph.D., Associate Professor of Sociology
Michael J. Roberts, Ph.D., Associate 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 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 institution 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 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. Social drama of work: self, roles, conflict, subcultures. Includes exploration of student work experiences, workers in the community, literacy, and film depictions of work worlds.

SOC 531. Working and Society (3)
Prerequisite: Sociology 101. Structure and change in labor force, nationally and internationally. Examines the operation of the American labor market with emphasis on the social division of labor by gender.

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)

SOC 554. Sociology of the United States-Mexico Transborder Populations and Globalization (3)

SOC 596. Current Topics in Sociology (1-3)
Prerequisite: Sociology 101. Selected specialized, controversial or currently relevant topics in sociology. Maximum opportunity provided for student initiative in determining course content and procedures. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

SOC 597. Investigation and Report (3)
Prerequisites: Fifteen units in sociology and consent of instructor. Analysis of special topics in sociology. Maximum credit six units.

GRADUATE COURSES

SOC 600. Proseminar in Sociology: Core Course (3)
Prerequisite: Graduate standing. Elements of profession of sociology and sociological research procedures. Connection between theoretical perspectives and appropriate research methods. Practice in scientific sociological writing styles to develop a master’s thesis proposal.

SOC 601. Advanced Classical Social Theory: Core Course (3)
Prerequisite: Graduate standing. Systematic treatment of original European and American classic sociological writings.

SOC 605. Advanced Contemporary Social Theory: Core Course (3)
Prerequisite: Graduate standing. Examination and analysis of original works in modern/postmodern sociological theory.

SOC 607. Advanced Quantitative Methods: Core Course (3)
Prerequisites: Graduate standing and Sociology 201. Research methods appropriate to particular types of sociological projects with emphasis on analysis of descriptive statistics and use of linear and non-linear regression methods. Methods of evaluating reported findings in sociological research. (Formerly numbered Sociology 760.)

SOC 608. Advanced Qualitative Methods: Core Course (3)
Prerequisites: Graduate standing and credit or concurrent registration in Sociology 600. Qualitative methods for data collection, analysis, and reporting in contemporary sociological research and related disciplines. Study, practice, critiques of techniques; ethnography, interviews, archival research, content analysis.
SOC 695. Topics in Directed Readings (3)
Prerequisite: Credit or concurrent registration in at least one core course or one seminar.
Selected reading providing coverage of social theory, social disorganization, social organization, social institutions, social psychology (sociological approaches), community research methods, population and demography, or special topics. Maximum credit six units applicable to a master’s degree.

SOC 696. Experimental Topics (3)
Prerequisite: Graduate standing.
Intensive study in specific areas of sociology. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

SOC 700. Seminar in Social Theory (3)
Prerequisites: Sociology 401 and 407.
Classics of sociology, American social theory, theory construction, application of theory to research, theoretical models, sociology of knowledge, special topics. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to a master’s degree.

SOC 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 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 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
Aida Blanco, Ph.D., Professor of Spanish, Chair of Department
Claudia V. Angelelli, Ph.D., Professor of Spanish
Juan M. Godoy Marquet, Ph.D., Professor of Spanish
Vincent Martin, Ph.D., Professor of Spanish
José Mario Martín-Flores, Ph.D., Professor of Spanish
(Librarian Adviser)
Liana Ewald, Ph.D., Associate 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:
Department of Spanish and Portuguese Languages and Literatures
Enrollment Services
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7703

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; six units selected from Spanish 603, 604, 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 504. Don Quixote (3)
Prerequisite: Spanish 405A.
A close reading of Cervantes’ novel Don Quixote, Parts I and II.

SPAN 515. Mexican Literature (3)
Prerequisites: Spanish 406A-406B.
Mexican literature from the Romantic period to the present. Special emphasis placed on contemporary era.

SPAN 520. Caribbean Area Countries Literature (3)
Prerequisites: Spanish 406A-406B.
Literature of Caribbean Islands, Central America, Colombia and Venezuela, from colonial period to present. Special emphasis on contemporary era.

SPAN 549. Spanish Phonetics and Phonology (3)
Prerequisite: Spanish 448.
Sounds of Spanish: consonants, vowels, semivowels, syllabic structure, rhythm, stress, sound system of Spanish: phonemes and allophones. Main differences between English and Spanish and between regional and social varieties of Spanish. Alternative analytical paradigms.

SPAN 561. Methods in Teaching Spanish as a Second Language (3)
Prerequisite: Spanish 350 or 448.
Teaching of Spanish as a second language: contemporary theory and methods.

SPAN 572. Spanish American Theatre (3)
(Offered only at IVC)
Prerequisites: Spanish 406A-406B.
Principal Spanish American dramatists and movements. Special emphasis on contemporary era.

SPAN 581. Mexican Sociolinguistics (3)
Prerequisites: Spanish 350 and 448.
Sociolinguistic phenomena occurring in Mexico from pre-Columbian times to the present. Language diversity before 1521 and throughout the colony; language contact and bilingualism; language policy and loss of indigenous languages. Emergence of Spanish as the national standard code in the nineteenth century. Regional dialects of Mexican Spanish.

SPAN 594A. Consecutive English/Spanish Interpretation (3)
Prerequisite: Spanish 350 or 391.
Consecutive interpretation techniques focusing on current events to include notetaking technique for interpreters, preparation for meetings, language register, listening, structure of a speech, abstracting meaning, sight translation in the booth.

SPAN 594B. Simultaneous English/Spanish Interpretation (3)
Prerequisite: Spanish 594A with a grade of B (3.0) or better.
Simultaneous interpretation techniques focusing on current events. Simultaneous, whispered, and relay interpretation, preparation for meetings, language register, listening, structure of a speech, abstracting meaning, sight translation in the booth.

SPAN 596. Selected Studies in Spanish (3)
Prerequisite: Spanish 302 or 381 or 382.
Topics in Spanish or Spanish American language, literature, culture and linguistics. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

SPAN 601. Seminar in Hispanic Literary Theory (3)
Prerequisite: Graduate standing.
Critical issues in Hispanic literary theory. Emphasis on contemporary theory: structuralism, post-structuralism, feminism, cultural studies, and gay and lesbian studies.

SPAN 602. Foundations and Research Methods of Hispanic Linguistics (3)
Prerequisite: Graduate standing.
Morphology, phonology, syntax of Spanish in historic and regional varieties. Qualitative and quantitative research related to sociolinguistics and pragmatics of Spanish, language acquisition, bilingualism, contact varieties. Spanish in leaching and translation.

SPAN 603. Early Modern Hispanic Literature (3)
Prerequisite: Spanish 601.
Philosophical, political, and aesthetic ideas in early modern Hispanic literature. Spanish and Spanish American texts spanning from fifteenth to eighteenth centuries.

SPAN 604. Spanish Literature: Eighteenth to Twentieth Century (3)
Prerequisite: Spanish 601.
Philosophical, political, and aesthetic ideas in literature of neo-classicism, 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 606. Spanish American Literature: Independence to Present (3)
Prerequisite: Spanish 601.
Spanish American literature in its artistic and ideological tendencies from age of independence to present. Literary movements include romanticism, Modernismo, criollismo, and indigenismo.

SPAN 611. Advanced Topics in Spanish Linguistics (3-6)
Prerequisite: Spanish 602.
Specific aspect of Spanish descriptive, historical, or theoretical linguistics. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.

SPAN 612. Seminar in Spanish Discourse Analysis (3)
Prerequisite: Spanish 602.
Analysis of oral discourse in Spanish. Basic readings in field and strategies to collect and analyze data.

SPAN 630. Golden Age Drama (3)
Prerequisite: Spanish 601.
The works of Lope de Vega and Calderon among others.

SPAN 631. Spanish Women Writers (3)
Prerequisite: Spanish 601.
Feminist and cultural studies approach to works of Spanish women writers. Analysis of issues on gender, class, race. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master’s degree.
SPAN 632. Seminar in Guilt and Innocence in Nineteenth and Twentieth Century Narrative (3)
Prerequisite: Spanish 601.
Evolution of detective novel from nineteenth through twentieth century. Socio-historic context and thematic concepts; truth and fiction, crime and punishment, construction of identities (criminal, delinquent, detective, victim). Maximum credit six units applicable to a master's degree.

SPAN 681. Issues in the Study of Spanish Bilingualism (3)
Prerequisite: Spanish 602.

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 751. Seminar in Realism (3)
Prerequisite: Spanish 601.
Theoretical and historical underpinnings of literary realism. Examines key realist texts from variable periods in Spain or Latin America. Topics include the picaresque novel, naturalism, regional novel, thesis novel, and magical realism. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

SPAN 752. Seminar in Literature and Culture of the Fin-de-Siécle (3)
Prerequisite: Spanish 601.
Cultural and socio-political discourses that shape literary and non-literary texts at the turn of the century. Spanish, Latin American, or transatlantic texts and fin-de-siècle periods, such as nineteenth to twentieth century, transition to new millennium. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

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 760. Seminar in Reading in the Transatlantic Imaginary (3)
Prerequisite: Spanish 601.
Exploration and critical analysis of texts produced by authors who lived and wrote between Spain and Spanish-America. Relationship between a cultural text and its place of origin.

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 multi-media programs for use in the classroom and in the language laboratory.

SPAN 781. Spanish Language Testing (3)
Prerequisite: Spanish 602.
Theories and research on language testing with emphasis on Spanish. Types and purposes of language measurement instruments. Characteristics of tests: practicality, instructional value, validity, reliability, test difficulty. Overview of test formats/methods and their consequences.

SPAN 792. Spanish Language and Society (3)
Prerequisite: Spanish 602.

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., Distinguished Professor of Speech, Language, and Hearing Sciences
Vera F. Gutierrez-Clielen, Ph.D., Professor of Speech, Language, and Hearing Sciences
Steven J. Kramer, Ph.D., Professor of Speech, Language, and Hearing Sciences
Tracy E. Love-Geffen, Ph.D., Professor of Speech, Language, and Hearing Sciences
Carol L. Mackerse, 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
Sonja Pruitt-Lord, 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

General Information
The master's degree program in speech pathology and professional doctorate in audiology (AuD) are accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology. The School of Speech, Language, and Hearing Sciences offers graduate study leading to the Master of Arts degree in speech, language, and hearing sciences, and to the credentials described below. The cooperating faculties of San Diego State University and the University of California, San Diego, offer a joint program leading to a Ph.D. in language and communicative disorders and a professional doctorate in audiology (AuD). The School of Speech, Language, and Hearing Sciences is committed to preparing speech-language-hearing professionals to meet the challenges of a culturally and linguistically diverse society. An M.A. degree in speech, language, and hearing sciences provides the necessary education, technical training, and creative experience necessary for professional activity, college-level teaching, and preceptors in speech-language pathology and related fields.

The programs utilize the facilities of the Speech, Language, and Hearing building, which includes observation rooms, school reference collection, and speech and hearing science laboratories. In the laboratories, students use personal computers, microprocessor based diagnostic audiometers, spectral signal analyzer, acoustic immittance equipment, hearing aid analyzer, digital spectrograph, Visipitch, phonic mirror, state-of-the-art ENG and evoked potential equipment, miniphonators, audimetric 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.

### 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 10 for the master’s degree programs in speech-language pathology 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 10**

#### 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 10:
- School of Speech, Language, and Hearing Sciences
  San Diego State University
  5145 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 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 (44 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: 55012B). 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 280 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, 600A, 600B, 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, 793, 794, 795, 797, 798, 799A. At least three of the nine units must be selected from Speech, Language, and Hearing Sciences 707, 750, 793, 794.

Students electing to pursue the Certificate of Clinical Competence in Speech-Language Pathology (ASHA), California licensure for Speech-Language Pathology, or the Speech-Language Pathology Credential for Language, Speech, and Hearing for California Schools should complete, in addition to the required courses listed above, additional courses and clinic hours required by national and state organizations. It is school policy that all credential students maintain a 3.0 grade point average in all 600-level and above credential courses.

Specialization in Bilingualism

Students who speak languages for which clinical training is not available (i.e., languages other than Spanish) and who have an interest in bilingualism are encouraged to apply to the concentration in speech-language pathology with a specialization in bilingualism. Students are required to pass a language proficiency test in a language other than English. To be a candidate for the specialization, a student must be admitted to the master's degree program in speech-language pathology since the specialization is coordinated with these endeavors.

The following core courses are required: Speech, Language, and Hearing Sciences 570, 600A, 600B, 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, 793, or 798 with approval of the school adviser. An additional three units must be selected from Speech, Language, and Hearing Sciences 707, 750, 793, 795, 796, 797, 798, 798A.

B. Concentration in Communicative Sciences (SIMS Code: 550142). This concentration has research and theoretical focus in the area of communicative disorders. Students interested in study with a research environment requiring a strong scientific foundation may avail themselves of this concentration.

Undergraduate Preparation. Speech, Language, and Hearing Sciences 101, 106, 300, 305, 320, 321, 340, 340L, 512, 513, 580; Psychology 260; Psychology 280 or Sociology 201 (or equivalent coursework in these areas).

Graduate Program. Required courses: 36 units to include Speech, Language, and Hearing Sciences 600A, 600B; 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).

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 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.

Section II.
Doctoral Program

http://chhs.sdsu.edu/slhs/phdmain.php
Speech, Language, and Hearing Sciences

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), Blumenfield (Speech, Language, and Hearing Sciences), Choi (Linguistics and Asian/Middle Eastern Languages), Emmorey (Speech, Language, and Hearing Sciences), Ferguson (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-Lord (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), Kitchevsky (Neurosciences), Kutas (Cognitive Science), Mayberry (Linguistics), Moore (Linguistics), Padden (Communications), Rayner (Neurosciences), 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 two courses on normal language and three courses on disorders of language.

The Electives requirement consists of at least four 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 four 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 two 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 and Engineering 258A as an elective.

Qualifying Examination. After successful completion of the first and second year projects, the student is eligible to take the qualifying examination. The qualifying examination consists of a written component which is to be in the form of a scholarly review of one or more issues related to the student’s chosen area of research and an oral component which will be a formal presentation of the paper to be presented at the annual fall doctoral colloquium or at a separate colloquium. Students will be encouraged to write their integrative paper in a form and quality which may be submitted to an appropriate journal.

Teaching. The teaching requirement may be satisfied under one of two options. Model 1 requires that the doctoral student teach a full course and submit the course syllabus to the Executive Committee for review at the end of the semester/quarter. Model 2 requires that the doctoral student serve as a TA (SDSU) and/or TA (UCSD) for two courses. The student will develop a syllabus in an area related to one of these courses and present a master lecture to the Executive Committee and an invited audience on a topic in the syllabus chosen by the Executive Committee.

Dissertation Committee. Prior to developing a dissertation proposal, the student must have a dissertation committee. The committee members are recommended by the doctoral program coordinators with consent of the executive committee, and then appointed by the graduate deans of both campuses. The dissertation committee will consist of at least five members, including four from the doctoral program faculty groups (with at least two members from each campus) and one faculty member from outside the doctoral program faculty groups.

Dissertation Proposal. The dissertation proposal will take the form of an NIH or NSF grant proposal. For model 1 dissertation (see below), the proposal will be based on completed research which become pilot studies for the grant proposal. The student may be encouraged to submit the dissertation proposal in the form of research or, 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 Studies office at UCSD.

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 Studies office at UCSD.

Credentialed 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.

Applicants 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.

Speech Language Pathology Credential: Language, Speech, and Hearing

(Credential Code: 00900)

Students desiring to work with pupils with speech-language and hearing impairments on an itinerant or pull-out basis must complete the Speech Language Pathology (SLP) Credential for Language, Speech, and Hearing (LSH). A master’s degree in speech, language, and hearing sciences is required of all candidates graduating with a SLP credential. Candidates for SLP credential in Language, Speech and Hearing (LSH) must complete the requirements for the Certificate of Clinical Competence (CCC) from the American Speech-Language Hearing Association and the requirements of California licensure in Language and Speech. See sections on Certificates and Licensure.

Admission Requirements:
1. Formal application to San Diego State University and to the School of Speech, Language, and Hearing Sciences. All applicants for the credential must satisfy the admission requirements of the university and of the school for classified graduate standing and be recommended by the school for admission to the credential program.
2. California Basic Education Skills Test (CBEST) results.
3. Interview with the coordinator of the Language, Speech and Hearing credential.

Program Requirements:
1. The credential program requires a master’s degree with a concentration in Speech-Language Pathology.
2. The following courses are also required: Speech, Language, and Hearing Sciences 525, 546 (or transcript credit in an equivalent course), 618A and or 619, 618B, 626A, 626B, 626C, 627, 929, 933.
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 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. Aural Rehabilitation (3)
Theoretical, methodological, and technical issues related to facilitating receptive and expressive communication in individuals who are deaf or hard-of-hearing. Emphasizes multidisciplinary case management of children.

SLHS 512. Phonological Acquisition and Disorders (3)
Prerequisite: Speech, Language, and Hearing Sciences 320. Phonology, phonological development, and phonological disorders as they relate to basic linguistic theory. Concepts considered through critical thinking and problem-solving.

SLHS 513. Language Development and Disorders in Early Childhood (3)
Prerequisites: Speech, Language, and Hearing Sciences 300, 320, 340.
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
Three hours of laboratory.
Prerequisite: Clinic clearance.
Screening speech and language of children in various community facilities and settings.

SLHS 525. Clinical Processes (1-2) Cr/NC
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 Issues in Aural Rehabilitation (1)
Prerequisite: Consent of instructor.
Theoretical, methodological, and technical issues related to the speech-language pathologist's role in facilitating communication in individuals who are deaf or hard-of-hearing.

SLHS 550. Deaf Studies and Education (3)
Prerequisites: Speech, Language, and Hearing Sciences 150; and Speech, Language, and Hearing Sciences 190. Emphasizes multidisciplinary case management of children.

SLHS 558. ASL Structure and Acquisition (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 559. 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 600A. Research Methods in Communication Sciences and Disorders (1)
Prerequisite: Admission to the M.A. program in speech, language, and hearing sciences.
Methods of investigation in communication sciences and disorders to include research design, basic statistics, principles of evidence-based practice, ethical conduct in research design and work with human participants. (Speech, Language, and Hearing Sciences 600A, 600B formerly numbered Speech, Language, and Hearing Sciences 600.)

SLHS 600B. Advanced Research Methods in Communication Sciences and Disorders (2)
Prerequisite: Speech, Language, and Hearing Sciences 600A.
Principles of evidence-based practice, single-subject design, statistics for single-subject design, statistics used in longitudinal research and scale development; regression and factor analysis. (Speech, Language, and Hearing Sciences 600A, 600B formerly numbered Speech, Language, and Hearing Sciences 600.)

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 designed to facilitate critical thinking and problem-solving.

SLHS 608. Acquired Neurologic Language and Cognitive Disorders I (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 600A, 600B, 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 600A, 600B, 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 625A. Pediatric Speech-Language Pathology (0.5)
Two hours of supervision.
Prerequisites: Speech, Language, and Hearing Sciences 600A, 600B, 607, 613, 617, and two units of 525.
Supervised intervention practice 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 625B. Neurogenic Speech-Language Intervention (0.5)
Two hours of supervision.
Prerequisites: Speech, Language, and Hearing Sciences 600A, 600B, 607, 613, 617, and two units of 525.
Supervised intervention practice 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 600A, 600B, 607, 613, 617, and two units of 525.
Supervised intervention practice with voice, fluency, and/or swallowing disorders. Up to two hours per week of client contact plus staffing. Up to three units may be taken concurrently. Maximum credit nine units.

SLHS 627. Advanced Field Clinical Practice in Speech-Language Pathology and Audiology (1-3) Cr/NC
Two hours of therapy, one hour of staffing, and Grand Rounds attendance once per month.
Prerequisite: Consent of instructor.
Supervised practice with speech-language-hearing problems in off-campus settings. Up to 10 hours per week of client contact plus staffing. Up to three units may be taken concurrently. Maximum credit nine units.
SLHS 672. Seminar in Communicative Disorders in Bilingual Adults (3)
Prerequisite: 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)
Prerequisite: Speech, Language, and Hearing Sciences 300 and demonstrated Spanish language competence.

SLHS 675. Augmentative Communication (2)
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 790. Seminar in Foundations of Language Science (3)
Prerequisite: Consent of instructor.
Current issues, theory, and research concerning language representation, processing, and neurological organization in adults and children.

SLHS 793. Seminar in Disorders of Language and Cognition/Children (3)
Prerequisite: Consent of instructor.
Language impairment in children, including primary versus secondary language impairment, modular versus processing explanations, relationships between language and cognition, as well as disassociations of development across different populations.

SLHS 794. Seminar in Language Disorders in Multilingual Populations (3)
Prerequisite: Consent of instructor.
Language disorders in linguistically diverse populations. Disorders of phonological, morphological, syntactic, and semantic aspects of target languages and their clinical implications.

SLHS 795. Advanced Research Practicum (3)
Prerequisite: 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
Registration required of students whose only requirement is completion of the comprehensive examination for the master's degree. Registration in 799C limited to two semesters.

DOCTORAL COURSES

SLHS 897. Doctoral Research (1-15) Cr/NC/RP
Prerequisite: Admission to the doctoral program.
Individual investigation to the general field of the dissertation.

SLHS 898. Doctoral Special Study (1-8) Cr/NC/RP
Prerequisite: Admission to the doctoral program.
Individual study in the field of specialization. Maximum credit eight units applicable to the doctoral degree.

SLHS 899. Doctoral Dissertation (1-15) Cr/NC/RP
Prerequisites: An officially constituted dissertation committee and advancement to candidacy.
Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.

CREDENTIAL COURSES

SLHS 929. Orientation to Public School Practicum (1)
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
Richard A. Levine, Ph.D., Professor of Statistics, Chair of Department
Juanjuan Fan, Ph.D., Professor of Statistics
Kung-Jong Lui, Ph.D., Professor of Statistics
Barbara Ann Bailey, Ph.D., Associate Professor of Statistics
(Statistics Programs Adviser)
Jianwei Chen, Ph.D., Associate Professor of Statistics
Chii-Dean Lin, Ph.D., Associate Professor of Statistics
Kristin A. Duncan, Ph.D., Assistant Professor of Statistics

Associateships
Graduate teaching associateships in statistics and biostatistics are available and are awarded on a competitive basis by the Department of Mathematics and Statistics. Application forms and additional information may be secured from the office of the Department of Mathematics and Statistics.

General Information
The Department of Mathematics and Statistics offers graduate study leading to the Master of Science degree in statistics. Students may pursue either the general degree or a concentration in biostatistics that emphasizes statistical methods and applications in the biological, health, and medical sciences.

Statisticians and biostatisticians are engaged in the acquisition and use of knowledge through the collection, analysis, and interpretation of data. Today, almost all disciplines – from economics to engineering, from social science to medicine – employ statistical methods. Such methods are essential in studying relationships, predicting results, and making informed decisions in many different contexts. This diversity of application of this field has stimulated the current demand for well-trained statisticians and biostatisticians at all degree levels.

The Master of Science degree provides advanced training, with emphasis on statistical methodology, and prepares students for careers in industry and government as applied statisticians or biostatisticians, or for entry into a doctoral program in statistics or biostatistics.

As part of the degree requirements, graduate students conduct theses or research projects under the guidance of faculty with active research interests in most general areas of probability, statistics, and biostatistics. These research areas include biostatistical methods, survival analysis, mathematical demography, data analysis, inference, stochastic processes, time series, Bayesian statistics, categorical data analysis, statistical computing, nonparametric statistics, sample surveys, multivariate analysis, linear models, experimental design, and clinical trials.

The graduate programs can prepare students for a teaching career.

Admission to Graduate Study
All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin.

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

Specific Requirements for the Master of Science Degree in Statistics
(Major Code: 17021) (SIMS Code: 776369)
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the 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 670, 672, 673, 676, 677, 678, 679, 680A, 680B, 696, 700, 701, 702, 795.
3. Complete three additional units of graduate level or approved 500-level statistics courses, not including Statistics 799A.
4. Complete three additional units of graduate level or approved 500-level courses offered by the Department of Mathematics and Statistics, not including Statistics 799A.
5. Complete three units of approved electives.
7. The thesis option (Plan A) requires approval of the graduate adviser and the statistics division faculty member who will chair the thesis committee. Students who choose Plan A must include Statistics 799A in the 31-unit program and are required to pass a final oral examination on the thesis, open to the public.
8. In other cases, Plan B will be followed. Students who choose Plan B are required to complete three additional units of 600- and 700-numbered statistics courses, not including Statistics 799A, and pass a comprehensive written examination. Policy and procedures for the Plan B examination are documented and available from the Department of Mathematics and Statistics.

Specific Requirements for the Master of Science Degree in Statistics with Concentration in Biostatistics
(Major Code: 17021) (SIMS Code: 776370)
In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the student must meet the following program requirements:
The student should have completed before entering the program the following undergraduate coursework: three semesters of calculus, one semester of linear algebra, and one semester of probability theory. The student should also have working knowledge of a programming language before entering the program. Students lacking some of the above undergraduate coursework may be admitted conditionally and may make up this coursework during the first year of the program (these courses will not be counted toward the degree course requirements).

The student must complete a minimum of 31 units of coursework as described below. Upon entry to the program, the student will be assigned to a graduate adviser in biostatistics. Thereafter, the adviser will meet with the student each semester and discuss his or her academic program. A program of study must be approved by the graduate adviser in biostatistics.

1. Complete Statistics 510, 670A, 670B with no grade less than B in each course. These are core statistics courses.

2. Complete Statistics 680A, 680B with no grade less than B in each course. These are biostatistics concentration courses.

3. Complete at least six units of courses in biostatistics and statistics, selected from the following with the approval of the graduate adviser in biostatistics: Statistics 520, 560, 580, 596, 672, 673, 676, 677, 678, 679, 696, 700, 701, 702, 795.

4. Complete at least six units of 500-level or graduate courses from a science of application of biostatistics (e.g., bioscience, health science, or medical science), selected with the approval of the graduate adviser in biostatistics. If the student has an undergraduate degree in an area of application of biostatistics, 500-level or graduate mathematical sciences courses may be substituted with the approval of the graduate adviser in biostatistics.

5. Complete one unit of Statistics 720.

6. With approval of the graduate adviser and the faculty member who will chair the thesis committee, the student may choose Plan A and complete three units of Statistics 799A. The chair of the thesis committee must be a faculty member from the division of statistics in the Department of Mathematics and Statistics. One of the other two members of the thesis committee must be a faculty member from a science of application of biostatistics (i.e., bioscience, health science, or medical science). The student must pass an oral defense of the thesis, open to the public.

7. In other cases, Plan B will be followed. Students who choose Plan B are required to complete three additional units of 600- and 700-numbered statistics courses, not including Statistics 799A, and pass a comprehensive written examination. Policy and procedures for the Plan B examination are documented and available from the Department of Mathematics and Statistics.

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 575. Actuarial Modeling (3)
Prerequisite: Statistics 550 or 551A. Actuarial models and applications of probability and statistics to insurance and other financial risks. Utility theory; risk models, compound processes; survival distributions and life tables; life insurance, annuities and benefits.

STAT 580. Statistical Computing (3)
Two lectures and two hours of activity. Prerequisite: Statistics 551B. Machine computation in development, application, and evaluation of advanced statistical techniques. Floating arithmetic and algorithm stability; numerical methods for parameter estimation (including maximum likelihood) and multivariate probability integration; simulation and other computer-intensive statistical techniques.

STAT 596. Advanced Topics in Statistics (1-4)
Prerequisite: Consent of instructor. Selected topics in statistics. May be repeated with the approval of the instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's degree. Credit for 596 and 696 applicable to a master's degree with approval of the graduate adviser.

GRADUATE COURSES

STAT 670A-670B. Advanced Mathematical Statistics (3–3)
Prerequisites: Statistics 551A. Statistics 670A is prerequisite to 670B. Distribution of random variables, characteristic functions, limiting distributions, sampling distributions, hypothesis testing and estimation, optimality considerations, applications of the linear hypothesis, invariance and unbiasedness to analysis of variance and regression problems, sequential techniques, decision theory.

STAT 672. Nonparametric Statistics (3)
Prerequisite: Statistics 551B or 670B. Theory and application of commonly used distribution-free test statistics, including sign and Wilcoxon tests, and corresponding nonparametric point and interval estimators. Kruskal-Wallis and Friedman tests for analysis of variance, nonparametric regression methods, and other selected topics.

STAT 673. Time Series Analysis (3)
Prerequisite: Statistics 551B or 670B. Box-Jenkins (ARIMA) methodology for analysis of time series data with statistical software applications. Autocorrection functions, stationary and nonstationary time series, autoregressive and moving average processes, seasonality. Methods for model-based estimation, diagnostics, and forecasting.
STAT 676. Bayesian Statistics (3)  
Prerequisite: Statistics 551B or 670B.  
Bayes’ theorem; conjugate priors; likelihood principle; posterior probability intervals; Bayes factors; prior elicitation; reference priors; computational techniques; hierarchical models; empirical and approximate Bayesian inference; posterior sensitivity analysis; decision theory.

STAT 677. Design of Experiments (3)  
Prerequisite: Statistics 550 or 551A.  
Methods for design and analysis of experiments with applications to industry, agriculture, and medicine. Concepts of randomization, blocking, and replication. Incomplete block designs, fractional factorial experiments, response surface methods, selected topics.

STAT 678. Survival Analysis (3)  
Prerequisite: Statistics 551B or 670B.  
Survival distributions; inference in parametric survival models; life tables; proportional hazards model; time-dependent covariates; accelerated time model and inference based on ranks; multivariate time data and competing risks.

STAT 679. Analysis of Discrete Data (3)  
Prerequisite: Statistics 551B or 670B.  
Discrete sampling models; goodness-of-fit testing; methods for binary data with covariates, including logistic regression and probit analysis; loglinear modelling 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 (3) 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.

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: Dramatic Arts 201
TELEPHONE: 619-594-5091 / FAX: 619-594-1391
http://ttf.sdsu.edu

Faculty
Donald J. Hopkins, Ph.D., Associate Professor of Theatre, Television, and Film, Interim Director of School
Gregory C. Durbin, M.F.A., Professor of Theatre, Television, and Film
Mark W. Freeman, M.F.A., Professor of Theatre, Television, and Film
Martha M. Lauzen, Ph.D., Professor of Theatre, Television, and Film
Jane Ofield, Professor of Theatre, Television, and Film
Emenius, Filmmaker in Residence
Timothy A. Powell, Ph.D., Professor of Theatre, Television, and Film
Randy Reinholz, M.F.A., Professor of Theatre, Television, and Film
David A. Morong, M.F.A., Associate Professor of Theatre, Television, and Film (Graduate Adviser)

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 is 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 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 media production are evaluated according to the following criteria:

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.

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4. For international applicants for whom English is not their first language, English language paper scores of 550 (or 213 online) or higher and a Certificate in Advanced English (CAE), indicating successful passage of the reading, writing, listening, and English usage test offered by the Cambridge English for Life (EFL) testing program.

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

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the School of Theatre, Television, and Film.

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

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

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

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

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

School of Theatre, Television, and Film
The following materials should be submitted by March 1 for the fall semester to:

School of Theatre, Television, and Film
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-7601

(1) Three letters of recommendation. At least one letter from an academic reference and at least one letter from a professor or professional acquainted with the applicant’s creative activities;

(2) A resume that includes any film and/or video production experience you have had;

(3) The best evidence applicant can provide of creativity relevant to media productivity, technical skill level, and command of the medium. Generally, a sample reel is the most useful. The sample reel should be a DVD (NTSC, region 0 or 1) of work in which applicant held a key creative role (writer/director, cinematographer, editor, sound designer, production designer). Credits must be clearly indicated. Even though long work may be submitted, no more than 10 minutes of the work provided will be viewed, so cue, or specify appropriate cueing, of sample. In lieu of a sample reel, other examples might include a sample of original textual work (play, story, or screenplay for writers/directors) or visual material (drawings, storyboards, designs, or studio photography that may reflect lighting, framing, or composition skills);

(4) A list, by author and title, of six books (novels, plays, essays) that have influenced applicant artistically;

(5) A list of three films (narratives, documentaries, experimental), plays or television programs that applicant admires, devoting one paragraph to each work;

(6) A list and description (in a sentence) of applicant’s hobbies and interests outside of film, video, and theatre;

(7) Personal Statement: A short essay describing your creative and career goals and how you think this program will benefit you. (Maximum two pages.)

Admission to the program is competitive, and satisfying these requirements does not guarantee admission. The decision to admit is based on consideration of the entire application file; promising applicants in unusual circumstances are encouraged to apply.

Students accepted for graduate study in the Master of Arts degree in television, film and new media production are initially admitted with conditional graduate standing (classified). Full classified standing is awarded only after the student has completed Television, Film and New Media 605 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 670 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 605, 625, 670, 675, and six units selected from Television, Film and New Media 530, 571, 573.
2. With approval of the graduate adviser, nine additional graduate units in Television, Film and New Media, Theatre, and other departments.
3. No more than three 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 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 605. Seminar: Production for Television and Film (3)
Prerequisite: Admission to M.A. program.
Film and television production. Lectures and production of two short media projects that link research to artistic process and familiarize students with all aspects of the television, film and new media program.

TFM 625. Seminar: Writing Short Narrative and Documentary Films (3)
Prerequisite: Classified graduate standing.
Creating scripts for short narrative films and documentary productions.

TFM 670. Seminar: Midway Review Production (3)
Prerequisites: Television, Film and New Media 605 and 625.
Development and completion of midway project for presentation before faculty jury. Research, presentation and analysis of related work, and creative engagement with material and subject matter to include retrospective written analysis of the work.

TFM 675. Seminar: Research and Bibliography in Media Production (3)
Prerequisites: Television, Film and New Media 670 and six units selected from Television, Film and New Media 462, 470, 530, 571, 573, and consent of instructor.
Methods of research, critical analysis, and writing in relation to creative work. (Formerly numbered Television, Film and New Media 600.)

TFM 761. Seminar: Selected Topics in Television, Film and New Media (3)
Prerequisite: Television, Film and New Media 675.
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
Donald J. Hopkins, Ph.D., Associate Professor of Theatre, Television, and Film, Interim Director of School
Ralph Funiciello, 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. Latham, M.A., Professor of Theatre, Television, and Film
Randy Reinholz, M.F.A., Professor of Theatre, Television, and Film
Loren P. Schreiber, M.F.A., Professor of Theatre, Television, and Film
Denitsa D. Bliznakova, M.F.A., Associate Professor of Theatre, Television, and Film
Peter J. Cirino, M.F.A., Associate Professor of Theatre, Television, and Film
Danielle J. Bedau, 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 Funiciello.

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.

Students already accepted into the program who request a change of specific concentration at a later date, will be required to meet the admission requirements for the new concentration.

**Concentration in Acting**

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 video, which would include two contrasting works: one contemporary piece and one classical piece from Shakespearean drama (total time not to exceed 12 minutes).
3. Three letters of recommendation attesting to the candidate’s academic qualifications and level of competence in acting.

For specific audition dates and locations, write to the Director, Graduate Acting Program, School of Theatre, Television, and Film, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182-7601.

**Concentration in Design and Technical Theatre**

In addition to meeting the admission requirements listed above, a student must demonstrate outstanding abilities in a particular area of design/technical theatre by submitting the following items:

1. Those students primarily interested in design must submit a design portfolio which contains sketches, renderings, graphics, floor plans, elevations, plots, color/fabric swatches, and photographs of productions, revealing the applicant’s creative ability in the chosen area or areas of design.
2. Those students primarily interested in technical theatre must submit a portfolio which contains evidence of technical direction and management experiences in scenic, lighting, or costume technology and design.
3. A resume which contains documentation of participation in not less than five full-length theatrical productions.
4. Three letters of recommendation attesting to the candidate’s academic, professional and personal qualifications from academic or professional theatre sources.

For specific interview dates and locations, write to the Director, Design Program, School of Theatre, Television, and Film, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182-7601 or visit our Web site at http://ttf.sdsu.edu.

**Concentration in Musical Theatre**

In addition to meeting the admission requirements listed above, a student must demonstrate professional potential in musical theatre by providing:

1. A resume of musical theatre accomplishments.
2. An audition, either in person or via video or DVD, to include two contrasting vocal selections and two contrasting monologues.
3. Three references attesting to the candidate’s academic qualifications and level of competence in the areas of acting, singing, and dancing.
For specific audition dates and locations, write to the Director, Musical Theatre Program, School of Theatre, Television, and Film, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182-7601 or visit our Web site at http://ittf.sdsu.edu.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Four of this bulletin. Candidates for the M.F.A. must have completed 30 units within their official program with a minimum grade point average of 3.0. A minimum of 24 units in the official program must be enrolled in and completed concurrently with or after advancement to candidacy. Students in each concentration must have successfully completed Theatre 600A and removed any deficiencies noted by the faculty.

Specific Requirements for the Master of Fine Arts Degree

(Major Code: 10072) (SIMS Code: 662505)

Forty-five of the sixty units required must be completed in courses numbered 600 or above. The remaining units may be selected from 500-, 600-, or 700-numbered courses in theatre or outside departments. At least 30 units of the student’s program must be completed in residence at San Diego State University, and the student must be in residence not less than two semesters. No more than six units in 798 will be accepted for credit toward the degree.

Concentration in Acting

(SIMS Code: 662517)

Candidates for the M.F.A. with a concentration in acting, in addition to meeting the requirements for classified graduate standing, must complete a 60-unit graduate program consisting of the following courses: Theatre 600A, 600B, 607* (must be taken four times for a total credit of 12 units), 610, 621, 624*, 630 (maximum two units), 631*, 632*, 633*, 634*, 746, 795, 799A.

* Courses not currently offered at SDSU.

Twelve additional units are to be selected from courses acceptable for graduate credit in the following areas: theatre, art, communication, education, English and comparative literature, exercise and nutritional sciences, history, linguistics, music, television, film, and new media. It is recommended that students include at least three units from Theatre 532, 533A, 533B, among the 12 units of electives. In special circumstances, additional courses acceptable for graduate credit in other departments may be selected with the approval of the student’s advisor.

Students in the concentration in acting will be reviewed by a faculty panel each semester to determine if their progress warrants continuation in the program. In conjunction with the completion of Theatre 746 and 799A, students must complete an adjudicated performance thesis project established and approved by their thesis committee. This project will be supported by a written thesis project report (analysis/apologia).

Concentration in Design and Technical Theatre

(SIMS Code: 662539)

Candidates for the M.F.A. with a concentration in design and technical theatre, in addition to meeting the requirements for classified graduate standing, must complete a 60-unit graduate program to include 35 units of core courses as follows: 1) three units selected from Theatre 540, 547, or 552, depending on student’s area of specialization; 2) Theatre 530A, 530B, 539, 610, 621, 644, 645, and 3) four semesters (12 units) of Theatre 643. The student must also complete 14 units of practicum, internship, and thesis/project consisting of Theatre 642 (must be taken for a total of four units), 746, 795 (must be taken for a total of four units), and 790 or 799A.

Eleven units of electives selected by student and adviser from graduate level courses in the following areas: theatre, art, music, English and comparative literature, history, and television, film, and new media. In special circumstances courses acceptable for graduate credit in other departments may be selected with the approval of the student’s adviser.

Candidates must prepare a production thesis project approved by their advisor. 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 advisor 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 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 designers.

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 554. 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 554A. 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 555. 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 555A. Movement for the Theatre II (2)
Four hours of activity.
Prerequisites: Admission to the MFA musical theatre program. Consent of instructor for undergraduates.
Musical theatre movement and dance styles. Maximum credit eight units.

THEA 570. Practicum in Theatrical Production (1-3)
Prerequisite: Theatre 440, 447, or 452; or admission to MFA in Design.
Design projects in areas of scenery, costume, lighting, sound, or makeup. Maximum credit six units for Theatre 570A and six units for Theatre 570B.
A. Independent Study
B. Design for Department Public Performances

THEA 580. Theatre in the Classroom (3)
Prerequisites: Theatre 310 and 315.
Methods of teaching theatre in elementary, middle, and secondary schools. Emphasis on pedagogy, organization of curriculum, play selection, and principles of producing plays in the classroom.

THEA 596. Selected Topics in Theatre (1-3)
Prerequisite: Twelve units in theatre.
A specialized study of selected topics from the areas of theatre. May be repeated with new content. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor’s degree. Maximum credit of six units of 596 applicable to a bachelor’s degree. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

GRADUATE COURSES

THEA 600A. Research and Bibliography (2)
Basic reference works, scholarly and critical journals; introduction to bibliographical techniques; exercises and problems in methods and exposition of research as it relates to the various areas of theatre. Recommended for first semester of graduate work, and prerequisite to advancement to candidacy.

THEA 600B. Thesis Preparation (1)
Prerequisite: Theatre 600A.
Development and presentation of thesis with focus on writing and formal parameters.

THEA 610. Seminar in Design Aesthetics for Theatre, Television, and Film (3)
Prerequisites: Admission to graduate program in theatre arts or television, film and new media production.
Aesthetic theories and practice. Design aesthetics as applied to theatre, television, film and new media production.

THEA 620. Seminar in History of Musical Theatre (3)
Prerequisite: Admission to M.F.A. musical theatre program.
Chronological survey of representative works from musical theatre history including major productions, personalities, styles, and genres.
A. Nineteenth Century Viennese Operetta through 1950
B. 1950 to Present
THEA 621. Seminar in Theories of the Theatre (3)
Prerequisite: Minimum three units of upper division theatre history. Theories of dramatic literature and performance, reflecting major stylistic movements and aesthetic philosophies of the stage from the classical Greeks to today (e.g., Aristotle, Lessing, Appia, Brecht, and Grotowski).

THEA 622A-622B. History of Musical Theatre
Laboratory (1-1) Cr/NC
Three hours of laboratory.
Prerequisite: Admission to M.F.A. musical theatre program. Laboratory component of Theatre 620A-620B. Theatre 622A must be taken concurrently with Theatre 620A; Theatre 622B must be taken concurrently with Theatre 620B.

THEA 623. Seminar in Musical Theatre Script and Score Analysis (3)
Prerequisite: Admission to M.F.A. musical theatre program. Representative works from musical theatre analyzed in terms of dramatic and musical aesthetics.

THEA 627. Musical Theatre Studio (4)
Eight hours of activity.
Prerequisite: Admission to M.F.A. musical theatre program. Acting, singing, and movement skills in relation to musical theatre performance. Maximum credit 16 units.

THEA 630. Individual Vocal Instruction (1)
Prerequisite: Admission to M.F.A. musical theatre program. Individual voice instruction/coaching for students in M.F.A. musical theatre program. Maximum credit four units.

THEA 642. Theatre Practicum Skills (1-1) Cr/NC
Prerequisite: Admission to M.F.A. in design and technical theatre program. Design projects for department productions. To be arranged with area adviser. Should be repeated each semester during the first two years of study for maximum credit four units.

THEA 643. Collaborative Studies in Design (3)
Two lectures and two hours of activity.
Prerequisite: Admission to M.F.A. design and technical theatre program. This course must be repeated each semester by the M.F.A. design student for a maximum of 12 units. Design of theatrical productions with emphasis on artistic collaboration and integration of scenery, costumes and lighting. Attention to graphic presentation techniques as well as designs produced.

THEA 644. Seminar in Contemporary Designers (3)
Prerequisite: Theatre 643.
Major set, costume, and lighting designers working in contemporary theatre, film, and television.

THEA 645. Seminar in Theatrical Lighting (3)
Prerequisite: Theatre 643.
Aesthetics of stage lighting as it applies to the areas of scenery and costume design. Exploration of literature in the field of theatrical lighting. Investigation of commercial and architectural lighting. Projects involving use of color and distribution of light.

THEA 647. Seminar in History of Theatre and Drama (3)
Prerequisite: Admission to M.A. or M.F.A. theatre arts program.
A. British and Continental Theatre
B. American Theatre

THEA 649. Topics in World Theatre (1-3)
Prerequisite: Admission to M.A. or M.F.A. theatre arts program. Intensive study in specific areas of world theatre. Forms, technologies, genres, cultural expressions, and contemporary developments. See Class Schedule for specific content. May be repeated with new content. Maximum credit six units applicable to the M.A. or M.F.A. degree in theatre arts.

THEA 650. Seminar in Musical Theatre Dance History (3)
Prerequisite: Admission to M.F.A. musical theatre program. Study of choreographic styles of musical theatre.

THEA 659. Musical Theatre Stage Direction (3)
Prerequisite: Admission to M.F.A. musical theatre program. Special problems in directing for the musical theatre.

THEA 746. Theatre Internship (3) Cr/NC
Prerequisites: Theatre 621 and consent of graduate coordinator and program director. Professional field experience in areas of design/technical theatre, acting, directing, musical theatre, and theatre for young audiences. (Formerly numbered Drama 746B.)

THEA 790. Directed Readings in Theatre Arts (3) Cr/NC
Prerequisite: Advancement to candidacy. Preparation for the comprehensive examination for those students in the M.F.A. program under Plan B.

THEA 795. Practicum in Theatre Arts (1-6)
Prerequisite: Theatre 621. Faculty supervised projects leading to public presentation. Maximum credit six units.

THEA 798. Special Study (1-3) Cr/NC/RP
Prerequisite: Project/assignment to be arranged with area adviser. Individual study. Maximum credit six units applicable to a master’s degree.

THEA 799A. Thesis or Project (3) Cr/NC/RP
Prerequisites: An officially appointed thesis committee and advancement to candidacy. Theatre 795 (Practicum in Theatre Arts) is a prerequisite if the student elects the preparation of a project.
Preparation of a project report or thesis for the master’s degree.

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

THEA 799C. Comprehensive Examination Extension (0) Cr/NC
Prerequisite: Completion or concurrent enrollment in degree program courses. Registration required of students whose only requirement is completion of the comprehensive examination for the master’s degree. Registration in 799C limited to two semesters.
Women’s Studies
In the College of Arts and Letters

OFFICE: Arts and Letters 346
TELEPHONE: 619-594-6524
http://www-rohan.sdsu.edu/dept/wsweb/masters.html

Faculty
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
(Graduate Adviser)
Irene Lara, Ph.D., Associate Professor of Women’s Studies
Doreen J. Mattingly, Ph.D., Associate Professor of Women’s Studies
Anh N. Hua, Ph.D., Assistant Professor of Women’s Studies
Kimala J. Price, Ph.D., Assistant Professor of Women’s Studies

Associateships and Assistantships
Graduate teaching associateships and graduate assistantships in women’s studies are available to a limited number of qualified students. Application forms and additional information may be obtained from the graduate adviser in the Department of Women’s Studies or on-line.

General Information
The Department of Women’s Studies offers graduate study leading to the Master of Arts degree in women’s studies.

The department, recognized as the nation’s first (1970) and among the largest, has a distinguished faculty in the humanities and social sciences. Discipline-specific expertise as well as feminist theoretical paradigms are available to satisfy students’ multi-faceted interests.

The Master of Arts degree is designed to provide advanced training for (1) students who plan to terminate their graduate studies at the master’s level, and (2) those who anticipate further study leading to a doctoral degree in women’s studies or related fields. The degree will also provide a foundation for further graduate work in professional degree programs such as counseling, social work, law, and public health. It will also prepare students for teaching in a community college and other institutions of higher learning. The M.A. will enhance students’ ability to participate professionally in a range of organizations and businesses in the public and private sector, particularly those addressing women’s issues.

Admission to Graduate Study
The application deadline for fall admission of new students in the Department of Women’s Studies is February 1 for the CSUMentor application and the GRE; March 1 for all other materials. All students must satisfy the general requirements for admission to the university with classified graduate standing, as described in Part Two of this bulletin. 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 transcript will be made on an individual basis by the admissions committee to determine whether evidence of sufficient preparation can be demonstrated. A student whose preparation is deemed insufficient by the Graduate Admissions Committee may be admitted as conditionally classified and will be required to complete specified courses in addition to the minimum of 30 units required for the degree.

The grade point average required for admission to the M.A. program in women’s studies is 3.0 for the last 60 units of the student’s undergraduate work, plus satisfactory scores on the verbal and quantitative sections of the GRE.

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

All applicants must submit admissions materials separately to SDSU Graduate Admissions and to the Department of Women’s Studies.

Graduate Admissions

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

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

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

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

(2) GRE scores (http://www.ets.org, SDSU institution code 4682).
No graduate application will be considered complete without received GRE scores.

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

Department of Women’s Studies
The following materials should be mailed or delivered to: Department of Women’s Studies
(Attention: Graduate Adviser)
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-8138

(1) Two letters of reference from individuals with direct knowledge of the applicant’s scholarly ability;

(2) A personal statement of background, intentions, and goals, including experience in women’s studies and with women’s issues, rationale for pursuing the M.A. degree, and relation of the M.A. degree in women’s studies to prior academic work and career objectives.

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

Specific Requirements for the Master of Arts Degree
(Major Code: 49991) (SIMS Code: 119502)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master’s degree as described in Part Four of this bulletin, the student, in consultation with the graduate adviser, must fulfill a three-unit language requirement selected from a foreign language, statistics, or American Sign Language. In addition, the student must complete a graduate program of 30 units with at least 21 units in women’s studies to include Women’s Studies 601, 602; nine units selected from Women’s Studies 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 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
choose 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.

Courses may include an international specialization consisting of
nine units of graduate courses selected from Women's Studies 512,
530, 560, 570, 580, 581, 605, 607, 609, 611. Other graduate level
courses may be included in the international specialization with the
approval of the graduate adviser.

Advanced Certificate in Women's Studies

(Certificate Code: 49991) (SIMS Code: 119503)

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.
Nineteen units can be selected within an area of specialization to
include six units of 600- or 700-level courses. The electives for the
three specializations – International, Health and Sexualities, Gender,
Race, and Class are as follows:

International: Women's Studies 512, 530, 565, 580, 581, 601, 603,
607, 609.

Health and Sexualities: Women's Studies 515, 522, 535, 565, 572,
605, 606, 608, 701.

Gender, Race, and Class: Women's Studies 512, 530, 535, 536,

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 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

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 rela-
tionships in differing cultural contexts, past and present.

WMNST 520. Reproductive Rights and Justice (3)
Prerequisite: Three upper division units in women's studies.
History, cultural attitudes, and politics of reproduction and sexual
health to include abortion, contraception, sterilization, sexually trans-
mitted 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 psychologi-
cal 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 polit-
ical movements, theoretical explanations, and current conditions.

WMNST 536. Gender, Race, and Class (3)
Prerequisite: Three upper division units in women's studies.
Intersecting theories of gender, race and class in both local and
global contexts. Major themes in history, culture, and contemporary
lives of women analyzed through feminist and critical race theories.

WMNST 540. Women and the Environment (3)
Prerequisite: Three upper division units in women's studies.
Women environmental activists and authors including those in
diverse communities, settings, and alliances (native American, British
colonial, Asian, American environmental movements, urban environ-
mental justice).

WMNST 545. Women and Sports (3)
Prerequisite: Three upper division units in women's studies.
Diverse women's creation of and involvement in recreational and
competitive sports, mid-1800s to present to include impact of medical
experts' views, homophobia, disability, individual elite athletes, team
sports, economic viability, and changes since Title IX.

WMNST 553. Women and the Creative Arts (3)
Prerequisite: Three upper division units in women's studies.
Representations of women in literary, visual, and/or performing arts
as well as crafts; artistic contributions of women across cultures; theo-
ries of creativity and gender. May be repeated with new content. See
Class Schedule for specific content. Maximum credit six units.

WMNST 560. Women in Muslim Societies (3)
Prerequisite: Three upper division units in women's studies.
Socio-political status of women in Muslim societies in Middle East,
North Africa, and Asia; women in the Quran; Muslim women's move-
ments.

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 570. Gender, War, and Peace (3)
Prerequisite: Three upper division units in women's studies.
Interdisciplinary exploration of women's relation to war, peace, and
militarism; women's peace activism and beliefs about motherhood;
women's roles in armed conflicts; effects of war on women; military
policy and beliefs about masculinity.

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.

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 advisor.  
Individual research project.

WMNST 598. Women’s Studies Internship (3) Cr/NC  
Prerequisites: Three upper division units in women’s studies and consent of instructor.  
Application of women’s studies theories and scholarship to community service and activism. Internship includes 120 hours of work in local public and private agencies serving women and girls. Maximum credit six units.

GRADUATE COURSES

WMNST 601. Foundations of Feminist Scholarship (3)  
Prerequisite: Classified graduate standing.  
Theories, issues, and major paradigms underlying feminist scholarship. Development of women’s studies as a discipline. Emphasis on multicultural approaches and perspectives.

WMNST 602. Seminar: Methods of Inquiry in Women’s Studies (3)  
Prerequisite: Classified graduate standing.  
Examination and critique of traditional research methods; methods of critical feminist investigation; designs of research proposals.

WMNST 603. Seminar: Advanced Feminist Theory (3)  
Prerequisite: Classified graduate standing.  
Analysis of categories of contemporary feminist theory including concepts of identity and difference; theories of subjectivity; feminist discourses, strategies, and practices.

WMNST 604. Seminar: Gender, Culture, and Representation (3)  
Prerequisite: Classified graduate standing.  
Representations of women, gender, and femininity in literature, art, music, and other cultural productions. Interconnection between representations of gender, race, ethnicity, class, and sexualities. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

WMNST 605. Seminar: Women and Social Policy (3)  
Prerequisite: Classified graduate standing.  
Laws and social policies impacting women and their families in historical and political context. Theoretical and practical implications to include workplace issues, economic justice, health, reproductive justice, violence, and regulation of sexuality and 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 Issues and Gender (3)  
Prerequisite: Classified graduate standing.  
Globalization of economy, culture, and politics with a focus on women’s lives. Case studies of effect of transnational 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 612. Seminar: Feminist Pedagogies (3)  
Prerequisite: Classified graduate standing.  
Feminist and interrelated critical pedagogies and their application in the classroom. Teaching from social justice, intersectional, and transnational approaches. Role of identity, difference, power, and embodiment in teaching and learning. Practical teaching skills and holistic classroom strategies.

WMNST 696. Selected Topics in Women’s Studies (3-6)  
Prerequisite: Classified graduate standing.  
Intensive study in specific areas of women’s studies, with emphasis on theoretical and methodological issues. May be repeated with new content. See Class Schedule for specific content. Credit for 596 and 696 applicable to a master’s degree with approval of the graduate adviser.

WMNST 701. Seminar in Women’s Studies (3)  
Prerequisite: Classified graduate standing.  
Interdisciplinary seminar integrating research in various areas of women’s studies in humanities, social sciences, arts and/or sciences. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units.

WMNST 797. Research (1-3) Cr/NC/RP  
Prerequisites: Advancement to candidacy and written approval of department graduate adviser.  
Independent research in a specialized subject in women’s studies.

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

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

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

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

(Also Acceptable for Advanced Degrees)

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

The following courses are acceptable on selected advanced degree programs.

Classics (CLASS)
In the Department of Classics and Humanities
In the College of Arts and Letters

UPPER DIVISION COURSE
CLASS 599. Special Study (1-3)
Prerequisites: Consent of instructor and department chair. 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.

Environmental Science (ENV S)
In the College of Sciences

UPPER DIVISION COURSES
ENV S 538. Environmental Policy and Regulations (3)
(Same course as Biology 538)
Prerequisite: Biology 354.
History of biological conservation and environmental laws; regulations governing biological resources; role of biologists; environmental impact analysis, operation of regulatory and resource agencies; biologists as expert witnesses; wetland protection and mitigation, state heritage programs, role of nongovernmental agencies.

ENV S 544. Terrestrial Ecosystems and Climate Change (3)
(Same course as Biology 544)
Prerequisite: Biology 534.
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.

ENV S 544L. Global Change Science Laboratory (2)
(Same course as Biology 544L)
Six hours of laboratory.
Prerequisite: Biology 354.
Ecological methods in ecosystem and climate change science to include chemical analysis (of stable isotopes and elements) and meteorological measurements. Modeling, data interpretation, and presentations.

European Studies (EUROP)
In the College of Arts and Letters

UPPER DIVISION COURSES
EUROP 501. European Life and Culture (3)
Prerequisite: Undergraduate: European Studies 301 or completion of the General Education requirement in Foundations of Learning II.C., Humanities required for nonmajors.
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. 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 Dark Ages (3)
(Same course as History 504)
Europe and the Mediterranean, sixth to eleventh centuries C.E. through various approaches: political, economic, social, and cultural. Topics include: barbarians and Vikings, the Byzantine, Arab, and Holy Roman Empires, the Norman Conquest, Charlemagne, Beowulf, feudalism, and serfdom. (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 advisor; 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.

Italian (ITAL)
In the Department of European Studies
In the College of Arts and Letters

UPPER DIVISION COURSE

ITAL 510. Italian and Italophone Cultural Studies (3)
Prerequisites: Italian 301 and 421.
Artistic, intellectual, literary, social, and political trends in Italy and in diaspora. May be repeated with new title and content. Maximum credit six units.

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 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 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.

Science (SCI)
In the College of Sciences

UPPER DIVISION COURSE

SCI 596. Experimental Topics (1-4)
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.