

**ANTHROPOLOGY MS**

College of Social and Behavioral Sciences  
Department of Anthropology  
358 Trafton Science Center N • 507-389-6504

Anthropology is the study of origins and diversity of human biology and culture. Students who complete the Masters of Science program in Applied Anthropology at Minnesota State University are competitive either for the applied professional career market or for admission to nationally recognized doctoral degree programs. Graduate work at Minnesota State University, Mankato offers students a generalist, holistic foundation in the discipline and one of the three subfields of Archaeology, Biological Anthropology or Cultural Anthropology. The program includes a series of core seminars in anthropological theory, research methods and professional practice. Electives are chosen from within the department or in a cognate field relevant to the students' professional goals.

**Admission.** The GRE is required. Prospective students should submit the application provided by the Minnesota State Mankato College of Graduate Studies and Research. For the Department of Anthropology, students need to provide three letters of recommendation and write a personal statement which describes their previous training in Anthropology and reasons for pursuing a graduate degree. Submit these materials to the Anthropology Graduate Coordinator. Anthropology attracts people from a wide variety of backgrounds, so we welcome applicants from any field. Students who do not have the equivalent of at least an undergraduate minor in Anthropology may need to take some undergraduate core courses before taking the Master's seminars.

**Financial Assistance.** We are able to offer some financial support to most of our students at some point in their training. Graduate teaching and research assistantships are granted each year in Anthropology, on a competitive basis. The Andreas Graduate Scholarship in Anthropology is also awarded annually. Some scholarships and assistantships are available for incoming students. Advanced students can apply for adjunct teaching positions.

To Apply for Financial Assistance, complete a Graduate Assistantship Application, submit a statement about your relevant experience (if you have taught or done research, etc.) with the other materials that you send to the Department of Anthropology. You can apply for other types of financial aid (such as Federal work-study or loans) through the Office of Financial Aid.

**Comprehensive Exam Policy.** All students are required to take a written comprehensive exam during or following the semester in which the core theory seminar courses are completed. The exam will consist of four essay questions submitted by the department faculty in two areas: 1) a special area of concentration selected by the student, and 2) general anthropological history and theory in physical anthropology, archaeology and ethnology. These exams will be graded independently by all members of the anthropology faculty, and the results will be summarized by the graduate coordinator. Students may pass or fail any question. Failed questions may be repeated only once. A student must pass all questions to continue in the program.

**Thesis Policy.** Students are required to complete a thesis as part of the degree program. The Department of Anthropology follows the basic guidelines found in the Minnesota State University, Mankato Graduate Studies Bulletin. Prior to commencing work on the thesis a student must present a thesis proposal to the examining committee. This proposal should be complete and presented to the student's committee no later than the end of the eighth week of the semester prior to commencing the thesis project. The student will present an oral defense of the thesis to the examining committee at least two weeks prior to the end of fall or spring semester. No thesis defense can be scheduled during the summer.

**ANTHROPOLOGY MS**

(Thesis - 30 credits)

**Required core (18-21 credits)**

ANTH 601	Seminar (6)
ANTH 602	Seminar: Research Methods (3)
ANTH 603	Practicing Anthropology (3)
ANTH 697	Internship (3)
ANTH 699	Thesis (3-6)

**Electives (9-12 credits)**

In consultation with an advisor, choose credits from the list of Anthropology courses below or choose one or more courses or seminars in a related field as appropriate to your career goals. In accordance with the Graduate College policies, at least one half of the credits earned for the Master's degree must be from courses at the 600 level. Also, no more than 10 credits earned as individual study, fieldwork, internship, or laboratory can be applied to the total elective course credit for the Master's degree.

ANTH 510	Archaeology of Minnesota (3)
ANTH 511	Archaeology of North America (3)
ANTH 512	Archaeology of Latin America (3)
ANTH 514	Museology (3)
ANTH 515	Cultural Resource Management (3)
ANTH 520	Human Osteology (3)
ANTH 521	Health, Culture and Disease (3)
ANTH 522	Forensic Anthropology (3)
ANTH 523	Evolution and Behavior (3)
ANTH 530	Peoples and Cultures of Latin America (3)
ANTH 531	Applied Cultural Research (3)
ANTH 532	Kinship, Marriage, and Family (3)
ANTH 533	Anthropology of Gender (3)
ANTH 534	Ethnographic Classics (3)
ANTH 535	Origins of Civilization (3)
ANTH 536	Anthropology of Aging (3)
ANTH 537	Applied Anthropology (3)
ANTH 538	Anthropological Theory (3)
ANTH 539	Qualitative Research Methods (3)
ANTH 580	Fieldwork: Archaeology/ Ethnology* (3-6)
ANTH 585	Topics in Anthropology (1-3)
ANTH 586	Workshop (variable subtitle) (1-3)
ANTH 591	Archaeology Laboratory* (1-3)
ANTH 592	Biological Anthropology Laboratory (1-3)
ANTH 593	Ethnology Lab* (1-3)
ANTH 604	Seminar in Advanced Topics (Variable topic, may be taken more than once) (3)
ANTH 677	Individual Study* (1-6)

Five to seventeen credits may be chosen from this list; up to 10 can be chosen from a related field as appropriate to the student's plan of study.

\*No more than 10 credits can be earned from this group.

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**COURSE DESCRIPTIONS****ANTH 510 (3) Archaeology of Minnesota**

A detailed study of Minnesota archaeology from ca. 12,000 years ago to ca. 1900, with a focus on diverse and changing Native American populations.  
Prerequisite: ANTH 102 or 210/310 or permission of instructor

**ANTH 511 (3) Archaeology of Native North America**

A survey of current knowledge about the prehistoric Native American inhabitants of North America from ca. 15,000 years ago until ca. 1900. Topics will focus on the processes of cultural development, change, and disruption by Euro-American influences.  
Prerequisite: ANTH 101, 102, or 210/310, or permission of instructor

**ANTH 512 (3) Archaeology of Latin America**

A detailed study of Latin American archaeology from ca. 12,000 years ago to ca. 1900, with a focus on diverse and changing Native American populations.  
Prerequisite: ANTH 101, 102, or 210/310, or permission of instructor

**ANTH 514 (3) Museology**

A review of the history and philosophy of museums, the legal and ethical issues impacting museums, the nature and treatment of collections, creation, exhibition and exhibit design, the role of museums in education, museum personnel and management, and museums in the technological/electronic age.

**ANTH 515 (3) Cultural Resource Management**

Review of how cultural resources are being preserved and managed under current laws and regulations. Emphasis on examination of conservation, preservation and rescue methods in modern archaeology, and problems and issues in historic preservation and resource management.

**ANTH 520 (3) Human Osteology**

An advanced examination of the human skeletal system and the application of this information in the fields of bioarchaeology, paleoanthropology, and forensic anthropology. This course features hands-on identification and analysis of human skeletal material, with an emphasis on laboratory techniques.

Prerequisite: ANTH 220, 221, 320, and 321 or permission of instructor

**ANTH 521 (3) Health, Culture, & Disease**

Cross-cultural examination of the response of peoples in non-Western societies to the human universal of illness. Non-Western concepts of disease, health, and treatment.

Prerequisite: ANTH 101, 220, or permission of instructor

**ANTH 522 (3) Forensic Anthropology**

This course will acquaint students with the application of human osteological techniques in civil and criminal investigations, including assessment of the recovery scene, determination of identity and analysis of evidence relating to cause and manner of death.

**ANTH 523 (3) Evolution and Behavior**

An examination of the biological basis of human behavior and organization from an evolutionary perspective. Prerequisite: ANTH 101 or 220 or consent.

**ANTH 530 (3) Peoples and Cultures of Latin America**

The contemporary peoples and cultures of Mexico and Central and South America. Emphasis is on cultural patterns and contemporary issues of the region.

Prerequisite: ANTH 101, 103, or 230/330, or permission of instructor

**ANTH 531 (3) Applied Cultural Research**

This course introduces concepts and methods of applying anthropological understanding to contemporary problems to bring about the empowerment of affected peoples. Case studies illustrate the impact and problems of culture change with special attention to its affect on powerless groups of people. Students will also design their own applied projects.

Prerequisite: ANTH 101, 103, or 230/330, or permission of instructor

**ANTH 532 (3) Kinship, Marriage, and Family**

Kinship is the most basic principle of organization for all human societies. The course analyzes the main theories and methods of studying social organization, and explores cross-cultural variations in kinship, marriage and family systems.

Prerequisite: ANTH 101, 103, or 230/330, or permission of instructor

**ANTH 533 (3) Anthropology of Gender**

Major anthropological theories of gender relations are read, discussed, and applied to a variety of contemporary ethnographic case studies.

Prerequisite: ANTH 101, 103, or 230/330, or permission of instructor

**ANTH 534 (3) Ethnographic Classics**

This course provides an opportunity for students to examine several of the "classic" ethnographies not used in regular course offerings. A different group of ethnographies will be used each year and students may register for the course as many times as they wish.

**ANTH 535 (3) Origins of Civilization**

The conditions which led to the evolution of complex societies and the ramifications of the continuing processes are the focus of this course.

Prerequisite: ANTH 101, 103, or 230/330, or permission of instructor

**ANTH 536 (3) Anthropology of Aging**

An evolutionary and cross-cultural examination of the aging process, status, and treatment of the elderly.

Prerequisite: ANTH 101, 230/330, or 220/230, or permission of instructor

**ANTH 537 (3) Applied Anthropology**

Examines the practical applications of anthropological knowledge to problem-oriented research and the problems of directed sociocultural change among contemporary populations. Selected projects and case studies are used to illustrate the complexity of applied sociocultural change.

**ANTH 538 (3) Anthropological Theory**

Examination of the intellectual history of anthropology from its nineteenth century roots to today's current theoretical trends. Students will learn about major school of thought in anthropological theory and practice critical examination of their applications.

**ANTH 539 (3) Qualitative Research Methods**

The aim of this course is to make students methodologically literate. Students will learn how to develop research designs that rely on qualitative research methods such as participants observation. They will learn how to apply these methods by participating in small scale studies of human behavior. Some quantitative methods will also be discussed. Students will learn to critically examine published data and conclusions.

**ANTH 580 (3-6) Fieldwork: Archaeology/Ethnology**

Field experience in which method and theory are learned through participation in and on-going field project.

Prerequisite: one of the following: ANTH 101, 103, 102, 210/310, or 220/320, or permission of instructor

**ANTH 585 (1-3) Topics in Anthropology**

This course allows faculty the flexibility to consider the challenges of new developments in anthropology. Content will vary from one course to the next. Students may take the course, with the permission of the instructor, more than one time.

**ANTH 586 (1-3) Workshop**

A brief intensive hands-on introduction to an anthropological topic usually as it applies to a particular issue or skill. Topics vary but might include: Understanding that race is not a scientific concept; combating racism and ethnocentrism; participant observation methods; culture shock; cultural diversity and communication; forensics; cultural resource conservation.

Prerequisite: depends on topic and instructor

**ANTH 591 (1-3) Archaeology Laboratory**

An introduction to archaeological laboratory techniques and museological practice, through participation in the various processes involved.

**ANTH 592 (1-3) Anthropology Laboratory**

Guided advanced laboratory work in biological/physical anthropology.

Prerequisite: ANTH 221 and 321, or permission of instructor

**ANTH 593 (1-3) Ethnology Lab**

Individual projects are done in close coordination with faculty member. Prerequisite: permission of instructor

**ANTH 601 (3) Seminar**

A comprehensive historical overview of the major theoretical schools of thought in anthropology. Special emphasis given to assumptions, methods of data collection and analysis, and major issues surrounding each theoretical perspective.

This course is often taught as a two semester sequence.

Prerequisite: permission of instructor

**ANTH 602 (3) Seminar: Research Methods**

Advanced review of major qualitative and quantitative methods used in anthropological research. Course is also intended to aid students in the preparation of the thesis proposal.

**ANTH 603 (3) Practicing Anthropology**

An advanced seminar examining the ways anthropologists practice anthropology. The course explores theoretical foundations and issues related to the professional practice of anthropology and focuses on developing necessary skills for sound professional practice.

**ANTH 604 (1-3) Seminar: Advanced Topics**

A seminar on a topic from one of the major sub disciplines in anthropology. Topic is announced. Seminar may be taken more than once for credit, as the topic changes.

Prerequisite: permission of instructor

**ANTH 677 (1-6) Individual Study**

Prerequisite: permission of instructor

**ANTH 697 (1-12) Internship**

Practical field experience, usually under the supervision of some off-campus professional

Prerequisite: permission of instructor

**ANTH 699 (3-6) Thesis**

Preparation on the master's thesis

Prerequisite: permission of instructor

**ART MA**

(DISCIPLINE-BASED)

College of Arts & Humanities  
Department of Art  
136 Nelson Hall • 509-389-6412

The graduate art faculty, diverse in educational and professional experience, shares the objective of quality education in a stimulating and creative environment. Small classes ensure personalized instruction from a faculty committed to excellence in their various studio and academic specialties. Graduates from the program are placed not only in education and business but often pursue additional work toward advanced degrees. The flexibility acquired by art graduate students as they develop their ideas and skills is attractive to potential employers.

The serious student with appropriate undergraduate art credentials may select courses in various specialized areas leading to a Master of Arts degree. Successful applicants must have a four-year baccalaureate degree from an accredited institution with a minimum undergraduate grade point average of 2.75/4.0 for the last two undergraduate years for the degree. A portfolio must be submitted and approved with the application for full admission. Applications are considered for each term and summer session. A comprehensive oral examination is required for the MA degree. Program options are flexible to accommodate specific needs or objectives in art education or in the studio areas of ceramics, drawing, fiber design, graphic design, painting, photography, printmaking or sculpture. An attractive feature of the studio curriculum, for example, is the creative thesis option, which includes a brochure and exhibition.

Students enjoy the advantages of excellent facilities, including the Conkling Art Gallery, a versatile, contemporary space providing exhibitions in all media from local, regional and national artists and collections. Student exhibitions, along with gallery openings, lectures and workshops, contribute significantly to a feeling of community among students, faculty and gallery patrons. In addition to the department's own slide collection, the Memorial Library provides a number of resources for art students. A vigorous art community in the Mankato, southern Minnesota and Minneapolis-St. Paul areas offers valuable off-campus stimulation and exhibition opportunities.

**Admission.** Candidates must complete departmental admission requirements as well as the requirements specified by the College of Graduate Studies and Research. An undergraduate major in art or its equivalent is required to pursue a graduate degree.

**Student Work.** The department may request the retention of at least one student work from the creative thesis exhibition for its permanent instructional and exhibition collection and the right to use photographs of students and their work. Additionally, the department cannot insure student work, material and equipment or take responsibility for its loss or damage.

**P/N Grading.** Students from other fields may elect graduate courses in art for P/N grading if prerequisites have been fulfilled or special consent is given by the instructor. Art majors are required to take art courses under the regular letter grade system except as indicated under general Graduate College requirements.

**Studio Course Costs.** Notations showing the costs of individual courses are included in the semester course schedules. In some cases, student fees are charged for materials used. Verifying such information with the individual instructor is suggested.

**ART MA** (Discipline-based)  
(Thesis Plan only - 30 credits)

The Art MA degree is offered as a studio arts emphasis only.

**Required Core (6 credits)**

ART 601 Introduction To Research (3)  
ART 699 Thesis (3)

**Required Art History (3-6 credits)**

Choose any 500 level Art History courses (3-6 credits)

**Required Art Studio (15-18 credits)**

Choose any 5/600 level Art Studio courses (15-18 credits)

**Required Related (non-art) Electives (2-8 credits)**

Choose any 5/600 level related elective courses (2-8 credits)

**Required Thesis or Alternate Plan Paper**

ART 699 Thesis (3-6)  
ART 694 Alternate Plan Paper (1-2)

## COURSE DESCRIPTIONS

**500 (3) Graphic Design**

Advanced level graphic design and communication problem solving. May be repeated. (F,S)  
Pre: consent

**501 (3) Advanced Graphic Design**

Advanced level graphic design and graphic communication problems. (F,S)  
Pre: Art 401, Art 402, and Art 403 or consent

**502 (3) Interactive Graphic Design**

Advanced study of motion, sound, and interactivity in design. Students build on existing skills to create conceptually and technically advanced works of digital communication. (F,S)  
Pre: Art 402 or consent

**510 (3) Drawing Workshop**

Continued in-depth exploration of drawing techniques and concepts. (F,S)  
Pre: Art 410 or consent

**512 (3) Life Drawing**

Advanced experience in drawing from the human figure. (F,S)  
Pre: Art 412 or consent

**513 (3) Scandinavian Art**

Overview of representative examples of the history of Scandinavian art from pre-Viking to modern times, concentrating on elements typical of each country or period and on developments that were particularly influential in the broader history of Western art.

**516 (3) Art of Africa, The Americas and the South Pacific**

Introduction to the art and architecture of indigenous peoples. Examination of representative works of art and major styles and cultures of preliterate societies in Africa, the Americas, Oceania, and of Pre-Columbian civilizations in the Americas.

**517 (3) Medieval Art and Architecture**

Introduction to art and architecture of Western Europe, the Byzantine Empire, and the Islamic world, from the second to the fifteenth centuries. Examination of representative works of art and major styles of Christian, Jewish, and Islamic cultures, including the Romanesque and Gothic periods.

**519 (3) Gender in Art**

Historical survey of the representation of gender with comparison of the artistic efforts of males and females and examination of art used to present gender-based issues including homosexuality, feminism, censorship and pornography.

**521 (2) Art Methods Elementary School**

Art expression related to child growth, development and teaching strategies. Emphasis on two-dimensional projects. (Required for student teaching and certification.) (F,S)

**524 (3) Art for the Exceptional Child**

Theory and practice of teaching mentally challenged, physically handicapped and other exceptionals.  
Pre: Art 421 or Consent

**526 (3) Art Methods Secondary School**

The characteristics and evaluation of junior and senior high art expression: the status, curricula and strategies of teaching. (Required for student teaching)  
Pre: Art 421 or Consent

**528 (3) Teaching Art History & Appreciation**

Application of instruction in art history and appreciation to elementary and secondary schools.  
Pre: Art 260, 261, 421 or consent

**529 (1) Graduate Art Education Seminar**

This course focuses on professional development and graduate research in art education. Topics include thesis, APP, and capstone project proposal writing, curriculum development, teaching with technology, developing a philosophy of education, professional conferences, and creating a teaching portfolio. (F)

Pre: consent of advisor

**530 (3) Fibers**

Advanced fabrication of textiles using loom and off loom techniques. (F,S)

Pre: Art 430 or consent

**540 (3) Painting**

First course in introductory graduate painting in oil and/or acrylics. May be taken by non-majors. (F,S)

Pre: consent

**545 (3) Watercolor**

Advanced experience in watercolor. (F,S)

Pre: consent

**550 (3) Graduate Ceramics I**

An advanced course which emphasizes individual research in technical, aesthetic and conceptual considerations. (F,S)

Pre: Art 450 or consent

**560 (3) Ancient Art**

Introduction to the art and architecture of the ancient era in its historical and cultural frameworks. Examination of representative works of art and major styles of ancient Mesopotamian, Egyptian, Aegean, Greek, Etruscan, and Roman cultures.

**562 (3) Renaissance Art**

Origins and development of Northern and Italian Renaissance art and architecture as an expression of historical, cultural and religious issues.

**563 (3) Mannerism to Romanticism**

Historical survey of art, architecture and urban planning in Europe and America from the late sixteenth to mid-nineteenth century: Mannerism, Baroque, Rococo, Neoclassicism and Romanticism.

**566 (3) Realism to Postmodernism**

Historical survey of art, architecture and urban planning in Europe and America from the mid-nineteenth century to the present: Realism, Impressionism, Expressionism, Surrealism, Abstract Expressionism, Minimalism, Op Art, Pop Art, and Postmodern issues and trends. (F)

**567 (3) Art of the Islamic World**

Historical survey of art and architectural developments from Islam's origins through the twentieth century. Course focuses on contextualizing monuments, paintings, and other arts from various regions around the world.

**568 (3) Design: History and Theory**

Survey of Graphic Design, Industrial Design and Architecture from historical and theoretical perspectives. Design issues examined from formal and contextual point of view, using analysis strategies that consider style, composition, historical context, functional/propagandistic significance and communicative ability.

**569 (3) Asian Art**

Historical survey of the art and architecture of China, India, Korea and Japan from pre-history to the 19th century.

**570 (3) Printmaking: Advanced Studio**

Continued investigation of advanced print making techniques and concepts. (F,S)

Pre: Art 470 or consent

**575 (3) Photography**

Expanding technical knowledge and visual awareness while building a portfolio in selected areas. (F,S)

Pre: consent

**580 (3) Sculpture**

Continuing development of a strongly personal means of aesthetic expression in three dimensions. (F,S)

Pre: Art 480 or consent

**590 (1-6) Workshop**

In depth investigation of a selected topic. (F,S)

**592 (1-6) Art History Seminar**

Specific problems in art emphasizing both individual research and contributions to the seminar group on advanced, in-depth topics.

Pre: consent

**594 (3) Topics**

Lecture/discussion/studio course on a selected area of discourse relating to the study of Art History, Art Criticism, Art Education or Art Studio. May focus on a specific artist, style period, cultural group or technical or methodological problem.

**600 (3) Graphic Design**

Advanced level graphic design and communication problem solving. May be repeated. (F,S)

Pre: consent

**601 (3) Introduction to Research in Art**

Introduction to the modes of research appropriate to art including creative research studies and investigative thesis research.

Pre: consent

**602 (3) Interactive Graphic Design****605 (1-9) Graduate Art Studio**

Graduate level course for all studio specializations. May be repeated.

Pre: one 500 level course in the studio specialization.

**610 (1-9) Drawing**

Continued exploration of drawing techniques and concepts at the graduate level. May be repeated. (F,S)

Pre: Art 510 or consent

**630 (1-9) Fibers**

Advanced graduate level textile fabrication. Should produce a consistent body of work. May be repeated. (F,S)

Pre: Art 530 or consent

**640 (1-9) Painting**

Graduate painting, emphasizing development of individual vision. May be repeated. (F,S)

Pre: Art 540 or consent

**645 (1-9) Watercolor**

Independent creative development. May be repeated. (F,S)

Pre: Art 545 or consent

**650 (1-9) Graduate Ceramics II**

A graduate course emphasizing further development and refinement of a body of work in preparation for a thesis and examination. May be repeated. (F,S)

Pre: Art 550 or consent

**670 (1-9) Printmaking: Advanced Studio**

Graduate level printmaking. May be repeated. (F,S)

Pre: Art 570 or consent

**675 (1-9) Photography**

Refinement of technical skills, seeing, and critical abilities while producing a significant body of work. May be repeated. (F,S)

Pre: Art 575 or consent

**677 (1-9) Individual Study**

Creative and technical problems or research in selected area. All students must file a special form in department office at time of registration. (F,S)

Pre: consent

**680 (1-9) Sculpture**

Continuing development of a strongly personal means of aesthetic expression in three dimensions. May be repeated. (F,S)

Pre: Art 580 or consent

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## AUTOMOTIVE ENGINEERING TECHNOLOGY

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### 692 (1-6) Art History Grad Seminar

Specific problems in art emphasizing both individual research and contributions to the seminar group on advanced, in-depth topics appropriate for graduate students.

Pre: consent

### 694 (1-2) Alternate Plan Paper

Alternate plan paper in lieu of thesis, done in cooperation with major professor. (Credit is "incomplete" until final approval by student's graduate committee.) (F,S)

Pre: consent

### 697 (1-12) Internship

Field experience in professional setting relating to the specialization: graphic design, museum or arts administration, etc. (F,S)

Pre: consent

### 699 (3-6) Thesis

Required of all candidates for the Master of Science or Master of Arts degrees. May be creative project or brochure exhibition option. (Credit is "incomplete" until final approval by student's graduate committee.) (F,S)

Pre: consent

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## AUTOMOTIVE ENGINEERING TECHNOLOGY

*College of Science, Engineering & Technology*  
*Department of Automotive and Manufacturing Engineering Technology*  
205 Trafton Science Center E • 507-389-6383 • Fax 507-389-5002

Although there is no graduate degree program in Automotive Engineering Technology, graduate work is possible. By combining courses in AET with courses in other programs, a student may create a graduate program leading to a Master of Science degree in Crossdisciplinary Studies. Also, 10 credits of AET course work can be used to meet the requirements of the Master of Science: Manufacturing Engineering Technology degree.

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### COURSE DESCRIPTIONS

#### AET 535 (1-4) Automotive Design & Construction

Involves designing and building of prototype vehicles. Topics include: vehicle design decisions, rules, budgets, chassis design, body and aerodynamics, drive train choices, construction techniques, and test procedures. An actual experimental car will be built in this class. May be repeated.

#### AET 568 (4) Automotive Research Methods & Design of Experiments

Automotive research techniques and equipment form the basis for this course. Environmental measurement, air flow testing, engine dynamometer testing, and vehicle performance measurement are covered. Emphasis is placed on research procedures, data acquisition and interpretation, and technical report writing. Current research projects from the automotive industry are also examined.

Prerequisite: AET 366, STAT 154

#### AET 592 (1-4) Seminar: Automotive

Selected automotive topics.

#### AET 637 (1-3) Automotive Emission Design and Measurement

An in-depth laboratory experience involving the evaluation of existing automotive emission control systems and the design or modification of those systems. Emission testing using chemical analysis and chassis dynamometer as required in state and federal test procedures is also included.

#### AET 638 (1-3) High Performance Engineering

This course is intended for individuals wishing to be employed in professional automotive racing as a product development engineer, technical representative for a race product supplier, or race engineer. An in-depth study of vehicle dynamics and engine design utilizing on-board data acquisition, air flow measurement, and the engine dynamometer.

#### AET 647 (1-3) Advanced Automotive Emissions and Measurement

A continuation of AET 637.

#### AET 648 (1-3) Advanced High Performance Engineering

A continuation of AET 638.

#### AET 677 (1-4) Individual Study

#### AET 694 (1-2) Alternate Plan Paper

A minimum of 2 credits is required.

#### AET 697 (1-5) Internship: Automotive

Automotive work experience in an area pertinent to the student's objective. Registration required prior to beginning employment.

#### AET 699 (2-4) Thesis

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## BIOLOGY MS

### BIOLOGY EDUCATION MS

(DISCIPLINE-BASED)

*College of Science, Engineering, & Technology*  
*Department of Biological Sciences*  
242 Trafton Science Center S • 507-389-2786

The Biological Sciences graduate program is designed flexibly to allow students, with their advisors, to mold and focus their program of study on professional interests and specific needs. To do this, students can draw from a broad range of graduate courses and select from a diverse and well-trained faculty for direction in research.

The Department of Biological Sciences is located in Trafton Science Center one of the best science buildings in the state university system. Trafton Science Center presents an open, collaborative atmosphere for graduate study and research, and includes well-equipped research and classroom laboratories. Another attractive feature is Biology's proximity to other science departments, whose faculty members provide opportunities for multidisciplinary study in chemistry, mathematics, computer science, physics and electrical engineering.

The department's modern facilities provide opportunities for research and teaching, with 18 research laboratories, plus support areas. Among those are a media kitchen, environmental chambers, animal complex, greenhouse, dishwashing facility, herbarium, museum and a garage for field equipment. The department's equipment is suitable for biological investigations ranging from ecosystem analysis to subcellular physiology.

Instrumentation available includes transmission and scanning electron microscopes, ultracentrifuges, diode array spectrophotometers, graphite furnace AA, scintillation counter, gas chromatographs with FID, ECD and MSD, ultrafreezers, computer-controlled physiology data acquisition, Coulter counter, fermentation facility, freeze dryers, thermocyclers (PCR) and other equipment necessary for modern biological research opportunities.

All members of the department's graduate faculty hold doctorates and have extensive research experience. Areas of concentration in research and teaching are Biology Education, Microbiology, Human Biology/Physiology, Environmental Science, Ecology, and Plant Science. Sub areas of teaching specialization include cellular biology, developmental biology, plant and animal ecology, genetics, parasitology, immunology, entomology, and aquatic biology.

Approximately 25 graduate teaching assistantships (TA) are available each year to qualified applicants. A minimum 3.0 GPA in undergraduate courses in math, chemistry, biology and physics and a 600 paper-based TOEFL (250 on the computer based exam) are required for consideration of a TA. Research assistantships are also offered, depending on external funding. Applications should be submitted by February 3 to the Biological Sciences Department. Although the first selection of assistantships occurs in March for the following academic year, the department encourages applications year-round because periodic openings occur.

**Admission.** Admission to the Biology MS Program requires that applicants satisfy the minimum requirements for admission to the College of Graduate Studies and Research. In addition, qualified applicants should satisfy the following three requirements for acceptance in the Biology MS Program.

- Demonstrate proof of meeting the academic requirements for the program by satisfying ONE of the following criteria:
  - Submit an official transcript signifying that you received a bachelor's degree in Biology or a closely related discipline with a minimum cumulative GPA of 3.00; OR
  - Submit official transcripts showing that you possess a bachelor's degree in a discipline other than Biology but have satisfactorily completed one course at the 200-level or above in three of the four following areas: Genetics, Ecology, Cell Biology, and Physiology. The minimum average GPA for these classes is 3.00; OR
  - Submit your official scores for the Biology Subject GRE with an overall ranking in the 70th percentile, as a minimum; OR
  - The graduate committee may consider applicants, who do not meet criteria a-c, on an individual basis with the support of a member of the Graduate Faculty in the Department of Biological Sciences.
- Submit a letter to the Department of Biological Sciences describing your interest in our Biology MS program. This letter should succinctly identify your career goals, your research interests, and identify the faculty member(s) with whom you are most interested in pursuing a thesis research project.
- International students from a country where English is not the primary language must submit an official IELTS score with a minimum score of 7 in speaking and in two of the other three ability categories. Similar scores from an equivalent exam can also be considered.

Applications will not be considered complete until all required items have been received.

**Requirements.** The Written Comprehensive Examination may be required at the discretion of the Examining Committee. The Oral Comprehensive Examination is required for each degree candidate and includes an open seminar on the candidate's research. The candidate distributes seminar announcements to department faculty at least one week prior to the seminar.

### BIOLOGY MS

(Thesis Plan - 30 credits)

(Alternate Plan Paper - 34 credits)

#### Required Core (11 credits)

BIOL	601	Biometrics (2)
BIOL	602	Research Methods/Proposal (2)
BIOL	695	Graduate Seminar (1) (3 Seminar credits required)
BIOL	619	Selected Topics (2-3) (4 Selected Topics credits required)
ENVI	619	Selected Topics (3) (may be taken to satisfy 3 credits of the BIOL 619 requirement)

#### Required Electives (19-23 credits)

Choose any 500/600 level Biology courses in consultation with an advisor

#### Required Thesis or Alternate Plan Paper

BIOL 694 APP (1-2)

BIOL 699 Thesis (3-6)

### BIOLOGY EDUCATION MS

(Discipline-based)

(Thesis Plan - 30 credits)

(Alternate Plan Paper - 34 credits)

Teaching licensure is a prerequisite to pursuing this degree which is for teachers interested in enrichment in a teaching area. This degree does not lead to initial teaching licensure. Students who desire initial licensure should consult the Master of Arts in Teaching (MAT) program. Please see the section concerning the MAT program that is listed in this bulletin.

#### Required Core (11 credits)

BIOL	601	Biometrics (2)
BIOL	602	Research Methods/Proposal (2)
BIOL	695	Graduate Seminar (1) (3 Seminar credits required)
BIOL	619	Selected Topics (2-3) (4 Selected Topics credits required)
ENVI	619	Selected Topics (3) (may be taken to satisfy 3 credits of the BIOL 619 requirement)

#### Required Biology Electives (7-11 credits)

Choose any 500/600 level Biology courses in consultation with an advisor

#### Required Professional Education (6 credits)

Choose 6 credits of professional education courses in consultation with an advisor

#### Required Related Science Electives (6)

Choose 6 credits of related science courses in consultation with an advisor

#### Required Thesis or Alternate Plan Paper

BIOL 694 Alternate Plan Paper (1-2)

BIOL 699 Thesis (3-6)

### COURSE DESCRIPTIONS

#### BIOL 502 (4) Stream Ecology

Study of flowing water on environment. Lab (fieldwork) included.

Prerequisite: BIOL 105, 106, 215, or consent

#### BIOL 503 (3) Conservation Biology

Applications of principles from ecology, genetics, behavior, demography, economics, philosophy, and other fields to the conservation and sustainable use of natural populations of plants and animals. Lectures and discussions address topics such as habitat fragmentation, parks and reserves, genetic diversity, population viability, and extinction. (S)

Prerequisite: BIOL 215 or consent

#### BIOL 504 (4) Wetlands

To provide students the values and functions of wetlands and to use wetlands as an example of the relationship of ecology to management, and the impact that classification systems have politically. Lab (fieldwork) included. (S)

Prerequisite: BIOL 105, 106, 215, or consent

#### BIOL 505 (3) Fisheries Biology

An introduction to fish biology and fisheries management, diversity, form and function in the aquatic environment, functional physiology, evolution and speciation, identification and use of keys, ecology, and management topics. (F)

Prerequisite: BIOL 105, 106, 215, or consent

#### BIOL 508 (4) Vertebrate Ecology

A field course in the ecology of birds, mammals, amphibians, reptiles, and fishes. Students are trained in sampling techniques such as mark-and-recapture, population size estimation and monitoring, and species identification of live and preserved specimens. Lectures encompass evolution and adaptation, origins, energetics, mating systems, morphology, geographical distributions, and population-level phenomena. Lecture and Laboratory. Pre: BIOL 105, 106, 215 or consent

#### BIOL 509 (4) Advanced Field Ecology

A field course focused on the function and dynamics of various North American ecosystems. Emphases will be on natural history, critical thought, and experimental design. Students will be trained in a variety of soil, plant, and animal sampling techniques. Depending on enrollment there may be additional costs (e.g. camping fees) for the course.

Pre: BIOL 105, 106, 215 or consent S

#### BIOL 510 (3) Global Change Biology

The natural or human-induced change in climate and the effect on terrestrial and marine ecosystems. The human species' place in the biological world, effects on various communities and potential methods of correcting detrimental effects with economic and social implications. (S)

Prerequisite: BIOL 105, 106, 215, or consent

#### BIOL 512 (4) Soil Ecology

Soil ecology will focus on the genesis and classification of soils, the physical properties of soil as they relate to habitat formation, niches, interactions that exist among soil organisms, human impact on soil systems relative to population pressures and management practices. Lab included. (S)

Prerequisite: BIOL 105, 106, 215 or consent

#### BIOL 517 (3) Biology of Aging and Chronic Diseases

Emphasis is placed on the biomedical aspects of aging and chronic disease. The course is designed for students majoring in biology, gerontology programs, or other health related programs. (S)

Prerequisite: BIOL 100 or 105

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## BIOLOGY

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### **BIOL 518 (4) Macro & Microscopic Imaging**

Properties and physical principles underlying biological images. The course provides a survey of macro-imaging techniques (such as x-ray tomography, magnetic resonance imaging, positron emission tomography, and ultrasound) and micro-imaging techniques (such as light microscopy, transmission and scanning electron microscopy, fluorescence microscopy, laser scanning confocal microscopy, and atomic force microscopy). (F)  
Prerequisite: one year of physics

### **BIOL 519 (2-3) Special Topics in Instrumentation**

Instruction in specialized biological instrumentation. (F)  
Prerequisite: BIOL 105 and 106

### **BIOL 520 (3) Diagnostic Parasitology**

Clinically important parasites. Protozoans, Flukes, Tapeworms, Roundworms, Ticks, Mites, and Insects. Designed for Medical Technology, Pre-Medicine, Pre-Veterinary, and Biology majors. Identification, clinical disease, epidemiology, and ecology are covered. Lab included. (S)

### **BIOL 521 (3) Entomology**

Morphological, ecological, medical, and economic significance of insects. (ALT-F)  
Prerequisite: BIOL 105 and 106 or consent

### **BIOL 530 (4) Hematology/Introduction to Immunology**

Collection, examination, evaluation, morphology, function, and diseases of blood cells. Hemostasis/coagulation of blood. Immunology theory is presented. Lab included. (S)  
Prerequisite: BIOL 230

### **BIOL 531 (3) Comparative Animal Physiology**

A comparison of adaptation mechanisms, from cell to organ-systems, used by animals in response to "changes in" environmental conditions such as oxygen, carbon dioxide, food availability, temperature, waste, solutes, pressure and buoyancy. (ALT-F)  
Prerequisite: BIOL 105, 106 or consent

### **BIOL 532 (4) Lake Ecology**

This course is an introduction to the physical, chemical and biological characteristics and interactions of inland freshwater lakes. Labs will emphasize field work; including data collection, analysis and discussion from five local lakes.  
Prerequisite: BIOL 105, 106, 215, or consent

### **BIOL 533 (3) Cardiovascular Physiology**

This course is a functional study of the heart and circulatory systems. (S)  
Prerequisite: BIOL 230

### **BIOL 534 (3) Development & Human Embryology**

Understanding the process of cell differentiation and development. These principles are then applied to the descriptive study of human embryology including the basis of congenital malformations. (F)  
Prerequisite: BIOL 100 or 105

### **BIOL 535 (4) Histology**

Study of types, arrangements, and special adaptations of human tissues. Lab included. (S)  
Prerequisite: BIOL 220

### **BIOL 536 (4) Animal Behavior**

An exploration of behavioral strategy, communication, learning, and social systems of animals, with emphases placed on the causes, evolution, ecological implications, and function of behavior at the individual and population level. Lab included. (S)  
Prerequisite: BIOL 105, 106, 215 or consent

### **BIOL 538 (3) General Endocrinology**

This course provides the basis for understanding hormones and the mechanisms of their actions in both the normal and pathological states. Sample topics to be included are diabetes, osteoporosis, hormones of reproduction, and current social and medical issues related to the course. (S)  
Prerequisite: BIOL 100 or 105

### **BIOL 541 (4) Plant Physiology**

Plant functions such as water relations, mineral nutrition, translocation, metabolisms, photosynthesis, photorespiration, fat and protein metabolisms, respiration, growth and development, phytohormones, reproduction and environmental physiology. Lab included. (S)  
Prerequisite: BIOL 105, 106, 217, and one semester organic chemistry

### **BIOL 542 (4) Flora of Minnesota**

Field identification of plants with emphasis on local flora. History of systematics, techniques, plant biogeography, methods of plant collection, preservation, preparation of herbarium specimens are covered. Lab and field trips included (S)  
Prerequisite: BIOL 105, 106, or consent. BIOL 217 recommended.

### **BIOL 543 (4) Plant Ecology**

Expands upon general principles of ecology and focuses on the factors that affect the distribution and abundance of plants, analysis of plant populations, and dynamics of plant communities. Lecture and lab (field work) included. (F)  
Prerequisite: BIOL 105, 106, 215, or consent. BIOL 217 strongly recommended.

### **BIOL 545 (4) Economic Botany**

We interact with plants every day and they've had a profound effect on human history and society. This course surveys the roles of plants in foods, beverages, medicines, drugs, poisons, fibers, fuels, building materials, ceremony, landscape, and more. Lecture, discussion, lab, and field trip. Open to non-science majors. (F)  
Prerequisite: BIOL 100 or 105 or consent

### **BIOL 549 (2) Computers, Networks, & Science**

This course provides students with the necessary skills to explore and utilize computer resources for scientific purposes. Students learn techniques for communicating with the world scientific community electronically, accessing internal computer networks, and locating computer-based scientific resources through a hands-on, problem solving approach.

### **BIOL 551 (4) Plant Biotechnology**

Lecture/laboratory course that presents an integrated view of plant biology, crop science, and current issues in biotechnology. Course focuses on issues of global concern such as sustainable food production, biofuels, genetically modified crops, molecular pharming, and tissue culture.

### **BIOL 552 (3) Biological Instrumentation**

The principle and operation of instruments and their application to biological research. Types of instrumentation examined include spectroscopic, chromatographic, electroanalytic, radiographic, and imaging. Laboratory Information Management Systems (LIMS) will also be examined. Emphasis is placed on GLP, GMP, and ISO9000 practices. (S)  
Prerequisite: BIOL 105, 106, or consent

### **BIOL 553 (4) Biological Engineering Analysis I**

The application of engineering principles and skills as applied to fermentation and to biological product recovery. (F)  
Prerequisite: BIOL 270 and one semester each of calculus, physics, and organic chemistry

### **BIOL 554 (4) Biological Engineering Analysis II**

Continuation of Biological Engineering Analysis I. The application of engineering principles and skills as applied to fermentation and to biological product recovery. (S)  
Prerequisite: BIOL 553

### **BIOL 556 (3) Biotechnology Project/Laboratory I**

Practical laboratory experience in biotechnology through the selection and development of a research project. Students are expected to spend an average of 12 hours per week on the project. (S)  
Prerequisite: concurrent enrollment in BIOL 553

### **BIOL 557 (3) Biotechnology Project/Laboratory II**

Continuation of Biotechnology Project/Laboratory I. Practical laboratory experience in biotechnology through the selection and development of a research project. Students are expected to spend an average of 12 hours per week on the project. (S)  
Prerequisite: BIOL 556, concurrent enrollment in BIOL 554

### **BIOL 560 (3) Introduction to Toxicology**

A lecture course covering basic principles of toxicity evaluation in living organisms, mechanisms of responses to chemicals or physical agents within an overview of practical medical, environmental and science policy implications. Presentation of comparisons of specific organ and tissue reactions to toxins in a variety of species follow these introductory concepts.  
Prerequisite: BIOL 105, 106, and one year of general chemistry

### **BIOL 561 (4) Environmental Toxicology**

A lecture/laboratory course that focuses on anthropogenic and natural toxicants,

mathematical modeling of the dispersion of chemical and physical agents in the environment, and effects on species and ecosystems with a special section on aquatic risk assessment. The laboratory includes techniques in environmental toxicity and a genuine research project.

Prerequisite: BIOL 460/560

#### **BIOL 562 (1) Toxicology Seminar**

A seminar course that involves critical evaluation of published studies in toxicology, student presentations of a selected published manuscript, and requires students to write a paper on one aspect of the course's topic area that semester. Topic areas vary each time the course is offered.

Prerequisite: BIOL 105, 106, and general chemistry

#### **BIOL 564 (3) Methods of Applied Toxicology**

A lecture/laboratory course focusing on the steps necessary to start a research project from project definition through methods testing and evaluation, and a final report that includes a project flow chart. Third year students will have senior and/or graduate mentors.

Prerequisite: BIOL 105, 106, and general chemistry

#### **BIOL 565 (3) Applied Toxicology Project**

A lecture/laboratory course where students perform all aspects of their own designed research topic in toxicology while critically evaluating the progress of other projects as well. Students will be expected to keep timelines or develop modified timelines as necessary. The inverted triangle approach of project design will be examined and then included in all designs.

Prerequisite: BIOL 464/564

#### **BIOL 566 (3) Principles of Pharmacology**

A lecture course that examines mechanisms of drug action, physiological responses and adverse reactions from sensitivities or allergies through overdose.

Prerequisite: BIOL 105, 106, 230, and one year of general chemistry

#### **BIOL 567 (3) Industrial Hygiene**

A lecture course that examines Minnesota State University as your own work place to develop reports on a selected group of chemical and physical hazards of the workplace. Evaluation methods and solutions to existing problems are developed with concise reporting skills.

Prerequisite: BIOL 105, 106, and one year of general chemistry

#### **BIOL 572 (4) Microbial Ecology & Bioremediation**

Role of microorganisms in soil, air, water, and sewage processes as well as methods of measurement and detection. Special emphasis on the role of microorganisms in bioremediation. Lab included.

Prerequisite: BIOL 105, 106, and 270 or 320

#### **BIOL 574 (4) Immunology**

Fundamental principles of humoral and cell mediated immunity and the application of these principles. Current experimental work in the different areas of immunology will be discussed. Lab included. (F)

Prerequisite: BIOL 105, 106, and 270

#### **BIOL 575 (4) Medical Microbiology**

This course will cover bacterial, fungal, and viral human pathogens: what diseases they cause, how they cause disease, and how humans defend against and prevent those diseases. In the laboratory, the student will isolate and identify pathogenic microorganisms using microbiological, biochemical, and immunological techniques. (F)

Prerequisite: BIOL 105, 106, 270, or consent

#### **BIOL 576 (5) Microbial Physiology & Genetics**

This course presents the physiology and genetics of microorganisms emphasizing those aspects unique to bacteria and archaea. Topics include: energy production; biosynthesis of small molecules and DNA, RNA, and proteins; the formation of cell walls and membranes; microbial differentiation and behavior; and the genetic and biochemical regulation of these processes. (S)

Prerequisite: BIOL 105, 106, 270

#### **BIOL 578 (4) Food Microbiology & Sanitation**

The role microbes play in production and spoilage of food products, as prepared for mass market. Topics include food-borne pathogens, epidemiology and control, and essential principles in sanitation including Hazard Analysis/Critical Control Point and ISO 9000 requirements. Lab included. (S)

Prerequisite: BIOL 105, 106 and 270

#### **BIOL 579 (4) Molecular Biology**

This course will cover both eukaryotic and prokaryotic molecular biology including: DNA and RNA structure, transcription, regulation of gene expression, RNA processing, protein synthesis, DNA replication, mutagenesis and repair, recombination, and insertion elements. A number of important techniques used in recombinant DNA technology will be discussed and practiced. (S)

Prerequisite: BIOL 105, 106, or consent

#### **BIOL 580 (2) Biological Laboratory Experiences for Elementary**

Provides experience with a wide variety of biological laboratory exercises to prepare prospective elementary teachers. Emphasis is on building knowledge, skills, and confidence. The course will cover major biological concepts and environmental education through classroom-ready examples selected to illustrate each concept. (F,S)

Prerequisite: BIOL 100 and C&I 322

#### **BIOL 585 (4) Biology Teaching Methods & Materials**

A basic science methods course designed to prepare prospective junior and senior high life science teachers. Course will cover science teaching methods and support materials as they apply to life science teaching situations. (F)

Prerequisite: 16 credits BIOL and EDFN 345

#### **BIOL 586 (3) Field-Based Teaching Methods & Materials**

A lecture/laboratory course that provides opportunity for prospective junior and senior high life science teachers to observe, practice, and refine their teaching skills. Students will work in a school setting and experience actual classroom.

Prerequisite: BIOL 485/585

#### **BIOL 590 (1-4) Workshop**

A variable topic course designed for a selected topic in Biology. Workshops provide an intensive learning experience on a new topic in the biological sciences and/or hands-on experiences in a current area not covered by other course offerings. The course involves background reading, demonstrations, and laboratory or field experiences. (F,S)

#### **BIOL 591 (1-4) In-Service**

(F, S)

#### **BIOL 601 (2) Biometrics**

This course will focus on the application of biometric principles to the planning and analysis of biological research similar to the student's thesis research. Completion of this course will aid the student in planning and completing her/his thesis. (F)

#### **BIOL 602 (2) Research Methods**

The design, planning, and writing of a biological research proposal will be discussed in terms of scientific method application, problem selection, methods, and assessments. The students will apply information from the class to prepare their research/thesis proposals and other professional communications. (S)

#### **BIOL 603 (2) Research in the Biological Sciences I**

#### **BIOL 604 (2) Research in the Biological Sciences II**

#### **BIOL 605 (2) Ethical Issues in Biological Research**

What does it mean to do biological research ethically? This course will discuss scientific integrity and misconduct, human and animal research, conflicts of interest and the ethical dimension of other topics in modern biological and biomedical research.

#### **BIOL 612 (3) Practicum in Electron Microscopy**

A laboratory course of basic training in the instrumentation and methodology use in scanning and transmission electron microscopy. With a hands-on approach, students will learn instrument operation and techniques necessary to process and examine a variety of samples, and whenever possible, to examine specimens related to their own research interests. (S)

Prerequisite: BIOL 418/518

#### **BIOL 614 (2) Paradigms in Ecology**

How does contemporary dogma influence the development of hypotheses and theory? Using primary literature, this course explores paradigms including equilibria in community ecology, information flow in molecular biology, the naturalist and mechanistic schools, and levels of natural selection. (Alt-S)

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## BUSINESS ADMINISTRATION

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### BIOL 618 (2) Biological Monitoring

### BIOL 619 (2-3) Selected Topics in Biology

Selected study of graduate level topics. May be repeated for different titled topic. (F,S)

### BIOL 677 (1-5) Individual Study

Prerequisite: consent

### BIOL 681 (1-2) Laboratory Supervision

Practical experience in preparing and teaching laboratory courses. (F,S)

Prerequisite: consent

### BIOL 685 (2) Teaching Assistant Methods

This course is design to provide teaching assistants (TA) with the knowledge and skills needed to prepare and teach college-level science courses. Special emphasis will be placed on the attainment of skills that maximize the effectiveness of material that will be presented to students. (F)

### BIOL 691 (1-5) In-Service

(F,S)

### BIOL 694 (1-2) Alternate Plan Paper

(F,S)

### BIOL 695 (1) Seminar

Students will attend and critique seminars presented by other students, faculty, and by people from external agencies and institutions. (F,S)

Prerequisite: none

### BIOL 697 (1-12) Internship

(F, S)

### BIOL 699 (1-6) Thesis

(F,S)

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## BUSINESS ADMINISTRATION

### MBA

*College of Business*

150 Morris Hall • 507-389-2967

Web site: [www.cob.mnsu.edu/mba/](http://www.cob.mnsu.edu/mba/)

The MBA at Minnesota State University, Mankato is designed to provide the leaders of tomorrow with the knowledge and skills required to succeed in a global business economy. The program emphasizes critical and strategic thinking, developing managerial skills, real-world applications, ethics, and leadership taught in a technologically-advanced, active learning environment.

The MBA will also provide opportunities for students to think critically and strategically, and to be able to apply and integrate the knowledge they have accumulated to specific business situations. The program features an executive seminar to provide the student with an opportunity to learn from, as well as, interact with top executives.

Courses are two credit models that meet one evening each week for eight-weeks. A student may choose to attend both eight-week sessions in a semester or just one eight-week session. A student with an undergraduate business degree who meets all the prerequisite requirements may complete the program in approximately two years.

### MASTER OF BUSINESS ADMINISTRATION

(34 credits total; all courses are two credit hours)

#### Tool Courses

MBA 610	Writing in the Workplace
MBA 612	Data Analysis and Statistics for Managers
MBA 614	Economic Analysis for Managers

#### Core Courses

MBA 623	Legal and Ethical Environment of Business
MBA 630	Accounting for Managers

MBA 634	Investment and Financial Decisions
MBA 642	Developing Human Resources
MBA 645	Information Technology and Systems Management
MBA 651	Managing Behavior in a Changing World
MBA 657	Managing Service and Manufacturing Operations

#### Strategy Courses

MBA 681	Global Business Strategy
MBA 683	Marketing Strategy
MBA 690	Executive Seminar
MBA 695	Strategic Management and Business Policy

#### Concentrations

\*credits from one of the following concentrations:

##### 1) Leadership and Organizational Change

MBA 663	Negotiations
MBA 665	Leadership
MBA 667	Organizational Development/Change

##### 2) Global Business

MBA 672	International Marketing
MBA 674	International Management
MBA 676	International Finance

##### 3) General

(select courses across the concentrations or from other departments)

#### Foundation Courses (12 or more credits)

A student must demonstrate competency in the areas of accounting, economics, business statistics, marketing, international business and finance. The competency can be demonstrated through completion of undergraduate equivalent courses or by completing online equivalent courses. Foundation courses are listed below.

- Minnesota State Mankato Undergraduate Equivalency is ACCT 200; IBC online equivalent is Accounting Foundations For Business Decisions
- Minnesota State Mankato Undergraduate Equivalency is ECON 202; IBC online equivalent is both Microeconomics Foundation and Macroeconomics Foundation
- Minnesota State Mankato Undergraduate Equivalency is ECON 207; IBC online equivalent is Statistics Analysis Foundation
- Minnesota State Mankato Undergraduate Equivalency is MRKT 310; IBC online equivalent is Marketing Analysis Foundation
- Minnesota State Mankato Undergraduate Equivalency is FINA 362; IBC online equivalent is Fundamentals of Managerial Finance
- Minnesota State Mankato Undergraduate Equivalency is IBUS 380; there is no IBC online equivalent

**MBA Foundation Courses Online.** In conjunction with the University of Wisconsin Internet Business Consortium MBA Foundation Program, Minnesota State Mankato students may complete some of their MBA Foundations courses online. This online program is utilized by AACSB International accredited MBA programs in both Minnesota and Wisconsin. Students should first consult with their Minnesota State Mankato MBA advisor to determine which courses would serve as equivalent courses. After meeting with the Minnesota State Mankato MBA advisor, students should then contact Marilyn Bergmann who is the Internet Business Consortium MBA Foundation Program director ([bergmama@uwec.edu](mailto:bergmama@uwec.edu) or 715-836-3880). Courses are offered each semester in 8 week modules. Please click on the following link for information related to this online option: <http://www.wisconsinonlinemba.org/>.

**Foundation Deficiencies.** Any undergraduate deficiencies will be specified at the time of application review. If all deficiencies are completed, an applicant may receive full admission to the MBA program. An applicant may also receive a conditional admittance to the MBA program based on completion of the deficiencies before any 600 level graduate courses are taken.

**600-Level MBA Courses.** A student may take up to 6 semester credits of 600-level MBA courses without being admitted to the MBA program. However, students not admitted to the MBA Program and desiring to take MBA credits must be admitted to the Graduate School as well as being admitted to another graduate program at Minnesota State University, Mankato. Students must also meet all prerequisites before taking any graduate courses in the College of Business.

## COURSE DESCRIPTIONS

**MBA 610 (2) Writing in the Workplace**

This course provides an advanced overview of the production and management of workplace communication. Participants will analyze and produce documents typical of workplace communication (ranging from memos and reports to business plans and web sites) and research presentations, documentation, and management of communication projects appropriate to their industry or business concerns.

**MBA 612 (2) Data Analysis and Statistics for Managers**

This course provides an understanding of the role of statistics related to the gathering and creation of information used in business decision making. Data analysis concepts covered include hypotheses testing, ANOVA, multiple regression, and time series analysis. The statistical program SPSS will be utilized extensively throughout the course.

**MBA 614 (2) Economic Analysis for Managers**

The course develops and integrates principles and ideas from economic and business and applies them to managerial decision making and policy formulation within a firm.

**MBA 623 (2) Legal and Ethical Environment of Business**

Managers need a good understanding of law to be effective businesspersons as well as good citizens. Law is fundamental to maintaining social order, and social order is necessary for successful and efficient markets. Additionally, law facilitates the creation and operation of efficient markets by, for example, providing necessary assurance to market players (buyers, sellers, investors, employers, employees, etc.) that their reasonable commercial expectations will be realized. In keeping social order, facilitating markets, and other ways, law places a pervasive external constraint on business decisions and transactions. Thus law plays a central role in business. This course will address some of the legal principles that are most relevant to business. The course will also consider how ethics (the branch of philosophy that addresses what conduct is right and what is wrong) affects business.

**MBA 630 (2) Accounting for Management**

Provides an in-depth analysis of managerial accounting concepts and procedures, including product and service costing, cost-volume-profit analysis, planning and control systems, capital budgeting, and contemporary managerial systems and issues. Students will become familiar with contemporary computer applications.

**MBA 634 (2) Investment and Financial Decisions**

This course involves an application of the quantitative techniques used by organizations to evaluate the investment in capital assets, the factors affecting security valuations, and the overall financing or capital structure decision. These issues heavily emphasize the risk and return interaction in the investment decision.

**MBA 642 (2) Management of Human Resources**

The course will cover a range of topics, including the strategic management of human resources, job analysis, hiring, performance appraisal, training and development, compensation, as well as labor relations.

**MBA 645 (2) Information Technology and Systems Managements**

The MBA MIS course integrates contemporary technology concepts with an emphasis on the managerial aspects of information systems. A review of contemporary technology examines data management, analysis, modeling, and design, and data communications, and networking in the most recent generation of technology. Project and change management, and information systems policy and strategy emphasize the managerial aspects of information systems. Project and change management examines how systems and technologies are implemented. It includes consideration of project planning, scheduling, and budgeting, as well as consideration of the change management required to implement projects, MIS policy, and strategy examines the IS project portfolio from the view of the senior IS executive and from the view of the business executive. It shows students how policy and strategy considerations affect every aspect of IS and, conversely, how IT transforms organizations and, indeed, the very nature of business.

**MBA 651 (2) Managing Behavior in a Changing World**

This course will focus on an area of study that attempts to explain, predict, control, and increase understanding of human work behavior in organizations both in the U.S. and internationally. Using a variety of techniques, students will learn about the nature of people as well as how individual and group behavior is influenced by organizational

factors. The intent is to use various theories and principles to help diagnose and solve organizational problems. The goal is to more effectively manage in today's environment so employees are engaging in ethical, creative, and productive behaviors on the job. Learning tools include some lecture/discussion, active learning groups, original readings, exercises, projects, cases, library research and presentations.

**MBA 657 (2) Managing Service and Manufacturing Operations**

This course addresses the concepts, techniques, and technology necessary to manage and control operations in services and manufacturing. The emphasis is on operations strategy, project management, quality management, and supply chain management.

**MBA 663 (2) Negotiation**

This class is designed to enhance negotiating skill. Students will learn techniques for generating beneficial outcomes from bargaining situations with regard to contracts, purchasing, and dispute resolution. A number of different bargaining models will be introduced and students will engage in simulated negotiations.

**MBA 665 (2) Leadership**

This course is designed to combine the "why" of leadership thinking with the "how" of leadership skill development. The class is both philosophical and practical, so you will have to both think and apply what you are learning. The course will provide students with opportunities to use theories to analyze leader behaviors, and with personal awareness and development. You will come out of the class with a Leadership Development Plan of your own to help you apply the class to your own development as a leader and manager.

**MBA 667 (2) Organizational Development and Change**

This course is designed to provide students with the theory and practical applications to diagnose organizational problems and to develop appropriate interventions and solutions to those problems. Students also use theory to guide practice in designing and implementing successful organizational change. These activities require students to use research and data analysis skills to gather data to learn about organizations.

**MBA 672 (2) International Marketing**

This course uses a strategic and integrative approach to global marketing decision making in a global economy. It provides an understanding of international marketing strategies and operations of both beginning and multinational firms. The web based Global Marketing Management Online software will be utilized extensively throughout the course.

**MBA 674 (2) International Management**

Comparison of major management systems within differing cultural environments. The course looks at cultural differences in value systems and human resource issues.

**MBA 676 (2) International Finance**

Financing investments and working capital management problems in multi-national environments.

**MBA 681 (2) Global Business Strategy**

The purpose of this course is to provide a comprehensive understanding of the policies, strategies and operations of companies doing business internationally.

**MBA 683 (2) Marketing Strategy**

Provides a comprehensive framework for the application of marketing concepts to the development and implementation of marketing strategy. The course emphasizes the activities and processes needed to design a marketing plan.

**MBA 690 (2) Executive Seminar**

The Executive Seminar provides the opportunity for students to interact directly with visiting executives in order to gain insight into the challenges in leading a modern complex business organization. Personal communication skills, reflective learning, critical thinking assignments, and career planning exercises help shape executive development.

**MBA 695 (2) Strategic Management and Business Policy**

This course examines policy problems of profit and non-profit organizations, including top management problem solving and decision making; planning; appraising the business environment; evaluating financial, human and physical resources; forecasting; developing and implementing objectives and strategies; evaluating alternatives; and monitoring results and social responsibility through case analysis and/or management simulation. This course also emphasizes the evaluation and development of capabilities and competencies in pursuit of competitive advantage.

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## CHEMISTRY

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### ACCOUNTING AND BUSINESS LAW

#### ACCOUNTING

ACCT 677 (1-4) Individual Study

ACCT 690 (2) Seminar: Accounting

#### BUSINESS LAW

BLAW 677 (1-4) Individual Study

BLAW 698 (1-6) Internship

#### FINANCE

FINA 677 (1-4) Individual Study

FINA 695 (3) Seminar: Finance

This course is provided on demand to interested graduate students who want to pursue further study in investigating the empirical and theoretical issues in the financial literature.

#### MANAGEMENT

MGMT 677 (1-4) Individual Study

MGMT 691 (1-3) In-Service

MGMT 696 (3) Seminar: Management

MGMT 698 (1-6) Internship

### MARKETING AND INTERNATIONAL BUSINESS

#### MARKETING

MRKT 677 (1-4) Individual Study

MRKT 697 (3) Seminar: Marketing

Prerequisite: consent of instructor

MRKT 698 (1-6) Internship

(F) Prerequisite: consent of instructor

#### INTERNATIONAL BUSINESS

IBUS 677 (1-4) Individual Study

(S) Prerequisite: consent of instructor

IBUS 696 (1-3) Seminar in International Business

Prerequisite: consent of instructor

IBUS 698 (1-6) Internship

(F) Prerequisite: consent of instructor

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## CHEMISTRY

*College of Science, Engineering, and Technology*

*Department of Chemistry and Geology*

242 Trafton Science Center N • 507-389-1963

Web site: <http://cset.mnsu.edu/chemgeol/>

The Department of Chemistry and Geology does not offer graduate programs. Graduate courses are available that might supplement other graduate programs or be part of a cross-disciplinary studies program. Graduate courses in the Department of Chemistry and Geology offer students an opportunity to strengthen their academic education in the field of chemistry and to develop the necessary research skills for future careers.

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### COURSE DESCRIPTIONS

#### **CHEM 507 (3) Water Chemistry**

A broad introduction to the chemistry of natural waters and chemical analysis of such systems. Topics covered may include: macromolecular analytes, organic analytes, inorganic analytes, major component/minor component/trace component determinations, matrix effects, equilibrium processes, modeling of chemical/physical transport, regulatory monitoring, and compliance issues. Laboratory exercises will provide students with goal-orientated, cooperative experiences in sampling and measurement of complex samples. (V)

Prerequisite: CHEM 305 (or equivalent)

#### **CHEM 513 (3) Advanced Inorganic Chemistry**

A survey of topics in inorganic chemistry including quantum mechanics, symmetry and group theory, solid state chemistry, molecular structure and geometry, bonding theories, and coordination chemistry emphasizing the theoretical foundation. (F)

Prerequisite: CHEM 440/540 (or equivalent)

#### **CHEM 515 (2) Inorganic Preparations**

The preparation and study of inorganic/organometallic compounds utilizing a variety of synthetic techniques including common Schlenk technique. The studies will include characterization by common instrumental methods such as IR, NMR, and UV-vis spectroscopy. Additional studies using instrumental techniques such as IR, NMR, UV-vis, electrochemistry, and magnetic susceptibility will also be conducted. (S)

Prerequisite: CHEM 413/513 previously or concurrently

#### **CHEM 523 (4) Spectroscopic Determination of Structure**

Spectroscopic techniques including nuclear magnetic resonance, infrared, and mass spectrometry for determining structural features of molecules will be covered. Spectroscopic methods emphasize interpretation of spectra and also provide hands-on operation of the corresponding electronic instruments. The laboratory uses these techniques for the determination of the structures of a series of unknown compounds. (F)

Prerequisite: CHEM 321 and 331 (or equivalent)

#### **CHEM 524 (3) Advanced Organic Chemistry**

Advanced synthetic organic reactions and their mechanisms. Laboratory will include examples of some of this chemistry and techniques for reaction monitoring and product purification. (S-E)

Prerequisite: CHEM 331 (or equivalent)

#### **CHEM 534 (2) Industrial Chemistry**

The synthesis and properties of organic macromolecules, especially industrially important polymers, and the chemistry of other industrially important chemical reactions and processes. (S-O)

Prerequisite: CHEM 321 (or equivalent)

#### **CHEM 537 (4) Food Chemistry**

This lecture laboratory course will cover the fundamental principles of food chemistry. Chemical and physical properties of major and minor food components will be discussed. The laboratory will involve both traditional wet chemical methods and more sophisticated instrumental analyses.

#### **CHEM 540 (3) Physical Chemistry I**

Detailed treatment of thermodynamics and chemical kinetics. Topics include equations of state, laws of thermodynamics, statistical thermodynamics, phase and reaction equilibrium, thermodynamics of solutions and electrochemistry, transport properties, and reaction kinetics. (F)

Prerequisite: CHEM 305, 321, one year of physics, MATH 121 (or equivalent)

#### **CHEM 541 (3) Physical Chemistry II**

Detailed treatment of quantum mechanics, spectroscopy, and statistical mechanics. Topics include the foundations of quantum mechanics, application of quantum mechanics to atomic and molecular structure, foundations of spectroscopic techniques, and statistical mechanics. The course concludes with a treatment of molecular reaction dynamics based on primary literature. (S)

Prerequisite: CHEM 440/540, MATH 122 (or equivalent)

#### **CHEM 545 (2) Advanced Physical Chemistry**

Integrated application of the content from 440 and 441 to an applied topic of interest to the instructor. The course will depend heavily on reading and discus-

sion of the current primary literature of physical chemistry. Possible topics include: atmospheric chemistry, thermodynamics of protein folding, catalytic processes, or molecular processes at interfaces. (V)

Prerequisite: CHEM 441/541

#### CHEM 550 (1) Physical Chemistry Laboratory I

Laboratory to accompany 540. An advanced treatment of measurement theory and data analysis precedes a series of thermodynamic and kinetic experiments designed to complement topics treated in lecture to help students develop more independence and sophistication in planning, performing, and reporting experimental work. (F)

Prerequisite: CHEM 440/540 previously or concurrently

#### CHEM 551 (1) Physical Chemistry Laboratory II

Laboratory to accompany 541. Experiments and computational projects in quantum mechanics, spectroscopy, and statistical mechanics. The experiments and projects will continue to work toward the goal of increasing the students independence and sophistication. (S)

Prerequisite: CHEM 441/541 previously or concurrently

#### CHEM 560 (3) Biochemistry I

Detailed analysis of the structures, properties, and functions of proteins, carbohydrates, lipids, and nucleic acids; theory for the purification and analysis of proteins and nucleic acids. Concurrent enrollment in CHEM 565 is recommended. (F)

Prerequisite: CHEM 321 and 331, and BIOL 105 and 106 (or equivalent)

#### CHEM 561 (3) Biochemistry II

Detailed analysis of the reactions involved in intermediary metabolism, translation, and replication. (S)

Prerequisite: CHEM 460/560 (or equivalent)

#### CHEM 565 (1) Biochemical Techniques I

A lecture/laboratory course which presents methodology and instrumentation used to purify and analyze biomolecules. Techniques include chromatography, autoradiography and radioisotope techniques, agarose and polyacrylamide gel electrophoresis, and spectrophotometry. (F)

Prerequisite: CHEM 460/560 previously or concurrently. CHEM 305 is recommended.

#### CHEM 566 (2) Biochemical Techniques II

Students work in teams to solve biochemical research problems by conducting and analyzing experiments which they design. (S)

Prerequisite: CHEM 460/560 and 465/565

#### CHEM 574 (2) Chromatography

Theory and applications of thin layer, paper, liquid, and gas chromatography. (F-E)

Prerequisite: CHEM 320 previously or concurrently is recommended

#### CHEM 575 (4) Instrumental Analysis

Theory and practice of modern instrumental methods including basic electronics. Special emphasis placed on sampling methods, analog and digital electronics, electrochemistry, spectrophotometric and chromatographic methods, surface and thin-film analysis, and computer acquisition and data processing techniques. (S)

Prerequisite: CHEM 305; PHYS 212 or 222 previously or concurrently

#### CHEM 577 (1-3) Special Topics in Instrumental Analytical Chemistry

Detailed study and focused discussion of a specific analytical technique such as electrochemistry, X-ray analysis, etc., or an area of analysis such as metals, bioanalytical, etc. May be taken more than once for credit, if the topic is different. (V)

Prerequisite: CHEM 305 (or equivalent)

#### CHEM 579 (4) Teaching Physical Science

Methods and materials for teaching physical sciences in middle school through high school. Clinical experiences required for the course. (S)

Prerequisite: consent

#### CHEM 582 (1-3) Problems in Teaching Science

Investigation of current issues and topics related to the teaching of science in K-12 grades. (V)

#### CHEM 585 (1-2) Seminar in Environmental Chemistry

Study of current environmental problems or issues with emphasis on the relevant chemical principles and understanding necessary to monitor or alleviate the problems. (V)

Prerequisite: CHEM 305 (or equivalent)

#### CHEM 590 (1-6) Workshop

#### CHEM 591 (1-6) In-Service

#### CHEM 597 (1-16) Internship

#### CHEM 602 (1-6) Topics: Analytical Chemistry

Recent advances in analytical chemistry or detailed study of advanced techniques or areas of analytical chemistry. This course may be taken more than once for credit if the topic is different. (V)

Prerequisite: CHEM 305 (or equivalent)

#### CHEM 616 (1-6) Topics: Inorganic Chemistry

Topics from inorganic chemistry which may included such fields as bioinorganic chemistry, organometallic chemistry, solid state chemistry, and other topics of current interest. This course may be taken more than once for credit if the topic is different. (V)

Prerequisite: CHEM 413/513 (or equivalent)

#### CHEM 621 (2-6) Topics: Organic Chemistry

Topics may include the chemistry of heterocyclic compounds or natural products, control of stereochemistry, photochemistry, advanced NMR techniques, or other areas of current interest not covered in other courses. This course may be taken more than once for credit if the topic is different. (V)

Prerequisite: CHEM 321 and 331 (or equivalent)

#### CHEM 642 (2-6) Topics: Physical Chemistry

Advanced consideration of some fundamental area in physical chemistry with application to a topic of current interest to the instructor and students. The course will depend on reading and discussion of current primary literature. Possibilities include: quantum mechanics and molecular structure calculations, condensed phase structure, development of novel materials, etc. (V)

Prerequisite: CHEM 442/542 (or equivalent)

#### CHEM 660 (2-6) Topics: Biochemistry

Detailed study of the literature in one selected area of biochemistry. This course may be taken more than once for credit if the topic is different. (V)

Prerequisite: CHEM 461/561 (or equivalent)

#### CHEM 677 (1-6) Individual Study

#### CHEM 682 (2) Chemistry for the Elementary Teacher

#### CHEM 685 (1-3) Laboratory Supervision & Maintenance

#### CHEM 690 (1-6) Workshop

#### CHEM 692 (1-6) Research

#### CHEM 694 (1-2) Alternate Plan Paper

#### CHEM 695 (1-2) Graduate Seminar

Students will present a seminar on either a research proposal for their graduate research or the results of their thesis research. (S)

#### CHEM 698 (1-8) Internship

#### CHEM 699 (3-6) Thesis

**COMMUNICATION DISORDERS MS**

College of Allied Health & Nursing  
Department of Speech, Hearing, and Rehabilitation Services  
103 Armstrong Hall • 507-389-1414

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Communication Disorders is a discipline in human services offering graduates rewarding careers in speech and language pathology. A Master of Science program is available for students who have an undergraduate major in communication disorders or its equivalent. Individuals without an undergraduate degree in CDIS who are interested in a Master of Science degree in CDIS should contact the department graduate coordinator. Employment opportunities are commonly available in schools, hospitals, rehabilitation centers, and private practice. The thesis or the alternate plan programs, when combined with students' undergraduate preparation, lead to the academic and practicum requirements for the Certificate of Clinical Competence (CCC) in Speech-Language Pathology issued by the American Speech, Language and Hearing Association (ASHA). Effective January 1, 1994, all graduate work applied toward the CCC must have been initiated and completed at a program accredited by the Council on Academic Accreditation (CAA) of ASHA. The Graduate Program in Communication Disorders is accredited by CAA.

**Program Purpose.** It is the purpose of the Master of Science Program in Communication Disorders to provide a high quality of student preparation leading to careers in human services for persons with communication disorders and to promote scientific investigation in the normal and abnormal development and use of speech, language, hearing, and swallowing.

**Admission.** Applications for admission are competitive and must be received by February 1st for the following fall semester. If a vacancy occurs during the academic year, mid-year admission is possible. Approximately 15 new admissions are accepted each year. To take graduate level courses, applicants must have been admitted by the College of Graduate Studies and Research. Competitive applicants should have attained (1) a Graduate Record Examination (GRE) score of at least 400 on the verbal and quantitative test sections (writing scores considered on a case-by-case basis), (2) a grade point average (GPA) of 3.0 or better on a 4.0 scale, and (3) professional coursework. Applicants who have not attained the above GPA (3.0) may be admitted provisionally on the basis of their performance on the GRE (contact department for specific requirements and prior experience). Three statements of recommendation are also required as well as submission of a writing sample in the form of a letter of intent.

**Financial Assistance.** A limited number of graduate assistantships in Communication Disorders are available. Applications can be obtained online from the College of Graduate Studies and Research and should be filed by February 1st for the following academic year or until positions are filled.

**Additional Information.** Graduate study in Communication Disorders is fundamentally different than undergraduate work, as graduate students are expected to demonstrate superior academic performance. To be recommended by the faculty for graduation, each student's Plan of Study is reviewed individually for deficiencies.

Since ASHA allows both graduate and undergraduate credits to be applied to certification in speech, graduate students must complete the residual course credits between their undergraduate credits and the total ASHA requirements, as well as the University minimums for theses or alternate plan paper options. Similarly, they must meet the ASHA standard for clock hours of clinical practicum and at least 325 of these hours must be earned at the graduate level. At least 50 percent of students' academic credits must be at the 600-level, excluding the thesis and APP credits. With its emphasis on competency in becoming a speech-language pathologist, students must have experienced clinical supervision by at least two different faculty supervisors. Graduate students are required to enroll in two nonconcurring sections of CDIS 695. Assignments for CDIS 695 will involve an off-campus facility that requires travel. Two semesters of Internship 698 are also required of all graduate students.

**Honesty Policy.** As members of Minnesota State University, Mankato community, students assume the responsibility to meet the academic obligations in a fair and honest manner. This responsibility includes avoiding such activities as cheating, plagiarism, or collusion. Please refer to the University policy on academic honesty for definitions of terms and explanations.

**COMMUNICATION DISORDERS MS**

(Alternate Plan Paper Track – 51 credits)  
(Thesis Track – 52 credits)

**Required Core (37-47 credits)**

CDIS 518 Seminar: Stuttering (2)  
CDIS 540 Organization and Management of Clinical Pro.(2)  
CDIS 577 Augmentative and Alternative Communication (2)  
CDIS 613 Naturalistic Evaluation Children (3)  
CDIS 614 Language Therapy and Children (3)  
CDIS 615 Seminar: Speech Sound Disorders (2)  
CDIS 616 Seminar: Voice Problems (2)  
CDIS 619 Adult Language Disorders (3)  
CDIS 621 Motor Speech Disorders (3)  
CDIS 688 Multicultural Issues (3)  
CDIS 692 Dysphagia (3)  
CDIS 695-01 Clinical Practicum SLP (2)  
CDIS 695-02 Clinical Practicum SLP (2)  
CDIS 522 Clinical Practicum Aud (2)  
CDIS 698 Internship (1-2) May take more than two internships.  
Other courses to complete certification requirements.

**Required Research (4 credits)**

CDIS 610 Research and Information Technology in Communication Disorders (4)

**Required Thesis or Alternate Plan Paper**

CDIS 694 Alternate Plan Paper (2)  
CDIS 699 Thesis (3)

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**COURSE DESCRIPTIONS****CDIS 502 (2) Child Language Disorders**

Types and characteristics of language disorders in children.  
Prerequisite: admission to major or concurrent enrollment in CDIS 503, consent of instructor, special education majors F

**CDIS 503 (1) Child Language Disorders Lab**

Lab associated with CDIS 4/502. Practice in applying course content to the language of children.  
Prerequisite: admission to major, or concurrent enrollment in CDIS 502, consent of instructor, special education majors F

**CDIS 505 (3) Beginning Sign Language**

The first in a sequence of courses which aim at the development of skills in the use of American Sign Language as a form of communication with persons who are hearing impaired or deaf.

**CDIS 506 (3) Intermediate Sign Language**

The second in a sequence of courses which aim at the development of skills in the use of American Sign Language as a form of communication with persons who are hearing impaired or deaf.  
Prerequisite: CDIS 4/505

**CDIS 507 (3) Advanced Sign Language**

The third in a sequence of courses which aim at the development of skills in the use of American Sign Language as a form of communication with persons who are hearing impaired or deaf.  
Prerequisite: CDIS 4/506

**CDIS 510 (3) Neurological Bases of Speech****CDIS 516 (3) Voice & Resonance Disorders**

Description, etiology, assessment, and management of voice and resonance disorders.  
Prerequisite: admission to major or consent of instructor F

**CDIS 517 (3) Stuttering**

Description, etiology, assessment, and management of fluency disorders.  
Prerequisite: admission to major, consent of instructor S

**CDIS 518 (2) Seminar: Stuttering**

Advances in basic research and practices.  
Prerequisite: CDIS 417 F

**CDIS 520 (3) Seminar: Advanced Audiology**

Seminar in audition and advanced audiologist concepts for the speech/language pathologist.  
Prerequisite: admission to major, consent of instructor

**CDIS 521 (3) Aural Rehabilitation**

Habilitative audiology and the instruction of the hearing-impaired, including hearing aids, speech reading, and auditory training as it relates to speech-language pathologists and audiologists.  
Prerequisite: admission to major or consent of instructor S

**CDIS 522 (2) Clinic Practicum: Audiology**

Clinical practice with audiometry, tympanometry, and patient counseling.  
Prerequisite: admission to major; CDIS 301, 421; GPA 2.8 in major F,S

**CDIS 523 (2) Educational Audiology**

Management of hearing impaired children in school settings.  
Prerequisite: admission to major or consent of instructor

**CDIS 524 (1) Overview of Dysphagia****CDIS 526 (1) Advanced Diagnosis and Treatment of Dysphagia****CDIS 531 (1) Orientation Lab**

Supervised observation of the diagnostic and remedial management of speech and language disorders.  
Prerequisite: admission to major plus concurrent enrollment in 4/534 S

**CDIS 534 (2) Orient to Clinical Practicum**

Procedures and operation of the clinical program in communication disorders.  
Prerequisite: admission to major plus concurrent enrollment in CDIS 4/531 S

**CDIS 535 (3) Augmentative Communication****CDIS 538 (3) Speech Sound Disorders**

Description, etiology, assessment, and management of speech sound problems.  
Prerequisite: Admission to major or consent of instructor plus concurrent enrollment in CDIS 4/539 (Speech Sound Lab) F

**CDIS 540 (2) Organization & Management of Clinical Speech Programs**

Delivery of clinical services in schools, hospitals, rehabilitation centers, and other settings.  
Prerequisite: concurrent enrollment in CDIS 555 Supervising Paraprofessionals

**CDIS 544 (3) Appraisal & Diagnosis**

Tests, measures, procedures, and processes for the evaluation and diagnosis of speech and language.  
Prerequisite: admission to major or consent of instructor S

**CDIS 545 (1) Grand Rounds-Foundation**

Observation of clinical case studies. S V

**CDIS 546 (2) Grand Rounds-Presentation**

Presentation of clinical case studies. S V

**CDIS 555 (1) Supervising Paraprofessionals**

Advances in basic practices of paraprofessionals.  
Prerequisite: concurrent enrollment in CDIS 540

**CDIS 569 (2-3) Hearing Disorders****CDIS 577 (2) Augmentative and Alternative Communication**

Explains and demonstrates the use of augmentative and alternative communication in the acquisition of knowledge about human communication disorders. S

**CDIS 610 (4) Research and Information Technology in Communication Disorders**

Strategies for identifying, designing, and critiquing research and professional information from classic and evidence-based practice perspectives. F

**CDIS 611 (3) Craniofacial Anomalies****CDIS 612 (5) Child Language Assessment & Therapy****CDIS 613 (3) Naturalistic Eval Child**

Non-standardized, informal assessment techniques of children's language disorders.  
Prerequisite: CDIS 402 S

**CDIS 614 (3) Language Therapy Children**

Remedial procedures and intervention programs for language impaired children.  
Prerequisite: CDIS 402 S

**CDIS 615 (2) Sem: Speech Sound Disorder**

Advances in basic research and practices as they pertain to speech sound problems.  
Prerequisite: CDIS 438 S

**CDIS 616 (2) Sem: Voice Problems**

Advances in basic research and practice related to voice and resonance problems.  
Prerequisite: CDIS 416 S

**CDIS 619 (3) Adult Language Disorders**

Advances in basic research and practice related to aphasia traumatic brain injury, right hemisphere dysfunction, and the dementias. F

**CDIS 621 (3) Motor Speech Disorders**

Apraxia and dysarthria of speech and dysphagia. Causes, assessment, and management.  
Prerequisite: CDIS 410 S

**CDIS 675 (1-3) Sem: Selected Topics**

Course content varies among speech disorders topics with each offering. V

**CDIS 677 (1-6) Individual Study**

Advanced individual study in a specific area. All terms

**CDIS 688 (3) Multicultural Issues in Speech, Hearing and Rehabilitation Services**

Recognition and differentiation of linguistic and cultural differences and disorder in the multicultural population.

**CDIS 692 (3) Dysphagia**

Description, etiology, assessment, and treatment of swallowing disorders across the life span. Bedside and instrumental techniques for the study of swallowing are presented.

**CDIS 694 (1-2) Alternate Plan Paper****CDIS 695 (2) Clinic Prac: Comm Disord**

Supervised delivery of clinical services.  
Prerequisite: admission to graduate program and 25 hours of observation

**CDIS 698 (1-12) Internship**

Prerequisite: CDIS 692 and a minimum of 25 clinical hours.

**CDIS 699 (3) Thesis****COMMUNICATION STUDIES**

*College of Arts and Humanities*  
*Department of Communication Studies*  
230 Armstrong Hall • 507-389-2213

Communication Studies offers programs leading to the Master of Arts, Master of Fine Arts, and the Master of Science degrees. Programs are available for all students who have a bachelor's degree. Students must complete graduate courses in communication theory and research methods and may design the remainder of their program with the approval of the Graduate Coordinator in Communication Studies.

**Admission.** In addition to completing the minimum requirements for the College of Graduate Studies and Research, students must also have a GPA of 2.75 or better in overall undergraduate studies and a 3.0 for the last two years of undergraduate work. In one packet, students should submit the following items: three letters of recommendation from individuals qualified to judge competence in speech communi-

## COMMUNICATION STUDIES

cation scholarship (e.g., a writing sample demonstrating research, sound analysis, organization and evidence such as a term paper, convention paper, professional report); and a statement of personal, educational and professional goals.

The Graduate Coordinator examines applications and determines if requirements have been met. If an applicant does not meet the requirements, admission may be provisional. Probationary status will be provided for applicants with an undergraduate degree whose GPA is below admission standards under the following conditions: Acceptable performance on the GRE of 1200 OR acceptance of a student petition and contingency of adherence to contract terms formulated by graduate faculty. Completion of the contract requirements will result in a change to a regular admission status.

Students with a major in Communication Studies may repeat any course in the department in an effort to improve grades. A student may repeat a specific course only once. In exceptional circumstances, a student may appeal to the department chair for a second repeat of a course. The official grade for the course, listings on a student's transcript, and other matters related to course repeats will adhere to appropriate university policies.

### COMMUNICATION STUDIES MA

(Thesis Plan - 33 credits)

(Alternate Paper Plan - 35 credits)

#### Required Core (6-9 credits)

SPEE 600 Seminar in Communication Theory (3)  
SPEE 601 Communication Research Methods (3)  
SPEE 602 Communication Pedagogy (3)  
SPEE 603 Strategies: Basic (0)\*

\*required only of Graduate Teaching Assistants

#### Required Electives (12-15 credits)

Choose 5/600 level electives in consultation with an advisor

#### Required Supporting Field Electives (6-9 credits)

Choose any 5/600 level related elective in consultation with an advisor

#### Required Thesis or Alternate Plan Paper (2-6 credits)

SPEE 694 Alternate Plan Paper (2 credits)  
SPEE 699 Thesis (3-6 credits)

Appropriate research tools such as ethnography, critical analysis, language, statistics or others may be required by the department. No P/N credit is acceptable in fulfilling major requirements except in the case of theses, practicums, internships, in-service courses and individual study, and then only by special permission of the department. Fifty percent (50 percent) of all coursework must be at the 600 level, not including thesis or alternate plan.

### COMMUNICATION STUDIES MFA-FORENSICS

(Thesis Option - 48 credits)

The Master of Fine Arts Forensics degree is a terminal degree for forensic professionals. Students who wish to teach and direct forensics programs at the college level will find the MFA is appropriate, tenurable degree at many four-year institutions around the country. The degree additionally certifies intense study of the theory and practice of communicative public performance for those students whose career aspirations are outside of collegiate forensics and teaching. Those students will find the degree as appropriate training for careers as a communication consultant, a motivational speaker and a communication trainer.

#### Required Core (33 credits)

SPEE 509 Performance Studies (3)  
SPEE 530 Directing Forensic Activities (3)  
SPEE 600 Seminar in Communication Theory (3)  
SPEE 601 Communication Research Methods (3)  
SPEE 602 Communication Pedagogy (3)  
SPEE 603 Strategies: Basic (0) \*  
SPEE 630 Forensics Practicum (3)  
SPEE 699 Thesis (3-6)

\* required only of Graduate Teaching Assistants

#### Choose one course from

SPEE 512 Organizational Communication (3)  
SPEE 545 Conflict Management (3)

#### Choose one course from

SPEE 513 Advanced Intercultural Communication (3)  
SPEE 621 Advanced Interpersonal Communication (3)

#### Choose one course from

SPEE 500 American Public Address (3)  
SPEE 501 Rhetoric of Western Thought (3)  
SPEE 620 Modern Rhetorical Criticism (3)

#### Choose one course from

SPEE 504 Teaching Speech Communication (3)  
SPEE 633 Communication for Professionals (3)

#### Required Electives (9 credits)

Choose 5/600 level electives in consultation with an advisor.

#### Required Supporting Field Electives (6 credits)

Choose any 5/600 level related electives in consultation with an advisor.

Appropriate research tools such as ethnography, critical analysis, language, statistics or others may be required by the department. No P/N credit is acceptable in fulfilling major requirements except in the case of thesis, practicums, internships, in-service courses and individual study, and then only by special permission of the department. Fifty percent (50 %) of all coursework must be at the 600 level, not including thesis or alternate plan.

### COMMUNICATION STUDIES MS

(Project Option - 36 credits)

#### Required Core (15 - 18 credits)

SPEE 600 Seminar in Communication Theory (3)  
SPEE 601 Communication Research Methods (3)  
SPEE 602 Communication Pedagogy (3)  
SPEE 603 Strategies: Basic Course (0)\*  
SPEE 697 Internship (6-9)

\*required only of Teaching Assistants

#### Required Electives (12 - 15 credits)

Choose 5/600 level electives in consultation with an advisor

#### Required Supporting Field Electives (6 credits)

Choose any 5/600 level related elective courses

### CERTIFICATE IN COMMUNICATION STUDIES

Employers routinely cite the need for effective oral, interpersonal and group communication skills. The Graduate Certificate in Professional Communication, offered by the Department of Communication Studies at Minnesota State University, Mankato, integrates communication theory, research and practical skills to provide students with the necessary abilities to succeed in a variety of professional arenas.

Our program has been developed primarily for working professionals who are unable to enroll in a traditional face-to-face graduate degree program. The graduate certificate program is offered entirely online. Prospective students can complete our program while continuing to work, and need not travel to Mankato for coursework. There is no residency requirement for this certificate.

Our program meets the needs of working students who have a bachelor's degree in a communication-related field and are employed in an occupation in which they are using communication skills. Our program provides these students with advanced training in communication skills for job enhancement, promotion opportunities, and/or career re-training.

#### Certificate Program

The graduate certificate is 12 credits, all of which are available online and all of which will also transfer into the MA program in Communication Studies should students decide to continue. The program consists of two core courses, and then students may select two additional courses from four more offerings. The program is designed to be completed in two years or less. Each course listed below will be offered at least once every two years.

#### Core (6 credits)

SPEE 604 Communication Training and Development  
SPEE 633 Communication for Professionals

**Required Electives (Choose 6 credits)**

SPEE 512	Organizational Communication
SPEE 515	Topics in Rhetoric and Culture
SPEE 545	Conflict Management
SPEE 601	Communication Research Methods

## COURSE DESCRIPTIONS

**SPEE 503 (3) Gender and Communication****SPEE 504 (3) Teaching of Speech Communication**

This course is designed to fulfill the Secondary Licensure requirement. The course covers teaching methods and materials needed to develop speech communication units for the secondary speech communication courses.

**SPEE 509 (3) Performance Studies**

This course is an overview of key performance studies concepts, including cultural performance, performance of everyday life, theories of play, social influence, and identity performance. Students will develop and present performances as a means to understand theoretical concepts.

**SPEE 512 (3) Organizational Communication**

This course is designed to develop an understanding of speech communication in the organizational context. The course will aid each individual in working more effectively within any type of organization through exposure to major theories and works in the area of organizational communication.

**SPEE 513 (3) Advanced Intercultural Communication**

This course explores the reasons we have difficulty communicating with people from other cultures, why misunderstandings occur, and how to build clearer and more productive cross-cultural relationships.

**SPEE 515 (3) Topics in Rhetoric and Culture**

Special interest courses devoted to specific topics within the intersecting fields of rhetoric and culture. Topics vary, and course may be retaken for credit under different topic headings.

**SPEE 516 (3) Topics in American Public Address**

Special interest courses devoted to specific topics within the field of American Public Address. Topics vary, and course may be retaken for credit under different topic headings.

**SPEE 530 (3) Directing Forensic Activity**

Methods and techniques in the development of competitive speech programs.

**SPEE 535 (3) Forensics Pedagogy**

Course is designed to give students a theoretical understanding of competitive speech and debate.

**SPEE 540 (1-3) Special Topics**

A course designed for students who have a general interest in communication studies. Content of each special topics course will be different. May be retaken for credit.

**SPEE 545 (3) Conflict Management****SPEE 550 (3) (1-3) NFL- Pedagogy**

Course reserved for graduate students taking online NFL modules.

**SPEE 551 (1-3) NFL-Introduction to Debate**

Course reserved for graduate students taking online NFL modules.

**SPEE 552 (1-3) NFL-Advanced Debate**

Course reserved for graduate students taking online NFL modules.

**SPEE 553 (1-3) NFL-Basics in Forensics**

Course reserved for graduate students taking online NFL modules.

**SPEE 554 (1-3) NFL-Introduction to Interpretation**

Course reserved for graduate students taking online NFL modules.

**SPEE 555 (1-3) NFL-Advanced Interpretation**

Course reserved for graduate students taking online NFL modules.

**SPEE 556 (1-3) NFL-Introduction to Argumentation**

Course reserved for graduate students taking online NFL modules.

**SPEE 557 (1-3) NFL-Advanced Argumentation**

Course reserved for graduate students taking online NFL modules.

**SPEE 600 (3) Seminar in Communication Theory**

An introduction to the communication field focusing on theory construction and the function of communication theory/models in the human experience. Contemporary theories of communication will be reviewed.

**SPEE 601 (3) Communication Research Methods**

Graduate students will gain a basic understanding of the research process as it applies to the field of communication. Research designs, methods, and data analysis procedures will be explored. Students will research, prepare, and write a research document.

**SPEE 602 (3) Communication Pedagogy**

Required for all graduate students in the Department of Communication Studies. Surveys traditional pedagogical theories as well as critical pedagogical theories as they pertain to teaching communication courses.

**SPEE 603 (0) Strategies: Basic**

Open only to teaching assistants of the basic course in Communication Studies. Covers course design, course evaluation, methodologies for skill development, and related topics.

**SPEE 604 (3) Communication Training and Development**

This course focuses on preparing professional trainers and developers in communication teaching, training and development.

**SPEE 620 (3) Modern Rhetorical Criticism**

This course includes the skills in the analysis, application, and evaluation of argumentative communication.

**SPEE 621 (3) Advanced Interpersonal Communication**

This course explores and critically examines interpersonal communication theory development, current research and leading theoretical perspectives, and potential applications in contemporary interpersonal communication contexts and relationships.

**SPEE 630 (3) Forensics Practicum**

This course is designed to help prepare students for their professional roles as directors or assistant directors of collegiate or high school forensics programs.

**SPEE 633 (3) Communication for Professionals**

This course is designed to enhance the communication skills of professionals. Students will learn theory and techniques of presentation for academic conferences, professional meetings, business and industry presentations, interviews, and group meetings. The use of technology in professional communication will be highlighted.

**SPEE 640 (1-3) Special Topics**

This course provides both graduate students and faculty the opportunity to work together with a specific theme that is timely and relevant to the field. May be repeated for credit.

**SPEE 677 (1-6) Individual Study**

Advanced independent study.

**SPEE 690 (1-4) Workshop**

Topics vary as announced in class schedules.

**SPEE 694 (1-2) Alternate Plan Paper**

Review and interpretation of a body of research.

**SPEE 697 (1-12) Internship**

Provides firsthand experience in applying communication theories in the workplace under the direction of an on-site supervisor.

**SPEE 699 (3-6) Thesis**

Original research which meets accepted research standards.

**COMPUTER SCIENCE MS**

College of Science, Engineering and Technology  
Department of Computer Science  
273 Wissink Hall • 507-389-2968

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The graduate program in Computer Science provides a foundation for advanced study and professional development. Graduate faculty in the department offer courses in artificial intelligence, systems and networking topics, advanced scientific computation, theoretical computer science and the engineering of software. Faculty research areas mirror and extend these topic areas and opportunities for graduate student research abound.

**Admission.** In addition to meeting the general admission requirements of the College of Graduate Studies and Research, successful applicants must meet the following requirements for admission:

1. The Graduate Record Examination (GRE) is required (contact department for specific requirements).
2. Applicants must have an undergraduate degree in computer science, software engineering, or a related field. Qualified students with other backgrounds may be granted provisional admission and required to complete undergraduate courses in core areas of computer science.

**Financial Assistance.** Lab Project and Research Assistantships requiring professional computer knowledge may be available in the department and from other departments and administrative offices on campus.

**COMPUTER SCIENCE MS**

(Thesis Plan - 32 credits)  
(Alternate Plan Paper - 34 credits)

**Required Core (13 credits from the following)**

CS 600	or IT 600	Research Methods (3) (REQUIRED)
CS 602		Research Seminar (1)
CS 610		Algorithm Analysis (3)
CS 620		Advanced Computer Organization (3)
CS 631		Knowledge-Based Systems (3)
CS 660		Operating Systems Theory and Design (3)
CS 662		Data Communications and Networking (3)
CS 680		Software Engineering Project (3)

**Required Electives ( 3 - 20 credits)**

Choose additional credits using any 500-level or 600-level courses. Up to 4 credits of 5/600 non-departmental elective courses may be selected in consultation with an advisor. At most, 12 credits of 500-level courses may be used for elective credits.

CS 601		Research Topics (3)
CS 611		Theory of Computation (3)
CS 630		Advanced Artificial Intelligence (3)
CS 677		Individual Study (1-4)

**Required Capstone Experience**

CS 699		Thesis (3-6) or
CS 694		Alternate Plan Paper (1-2)

Prior to registering for CS/IT 694 or CS/IT 699, the student must satisfy the comprehensive examination requirement and must have successfully completed the core course credits. Students must be registered for a minimum of one credit of Thesis/APP for every semester that they are working on their paper.

A minimum GPA of 3.5 is required in the 13-credits applied to the core course requirement. This requirement may be waived if the student scores a passing grade on a comprehensive examination that contains questions from the computer science core (except for CS 602).

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**COURSE DESCRIPTIONS****CS 500 (3) Software Design and Architecture**

Current processes, methods, and tools related to formal methods for modeling and

designing software systems. Topics include software architectures, methodologies, model representations, component-based design, patterns, frameworks, CASE-based designs, and case studies.

**CS 510 (3) Abstract Machines & Grammars**

This course studies the theoretical underpinnings of modern computer science, focusing on three main models of computation: DFA, PDA, and Turing machines. Students determine model capabilities and limitations are: what is and is not computable by each of them.

Prerequisite: consent of instructor

**CS 515 (3) High Performance Computing**

This course covers High Performance Computing (HPC) techniques used to address problems in Computational Science. Topics include the application areas and basic concepts of parallel computing, hardware design of modern HPC platforms and parallel programming models, methods of measuring and characterizing serial and parallel performance, and computational grid technologies.

Prerequisite: consent of instructor

**CS 520 (3) Advanced Computer Organization**

Advanced topics in computer architecture including a major emphasis on measuring and improving computer performance. Topics include advances in pipelining and analysis and optimization of storage systems and networks, multiprocessor challenges and trends.

Prerequisite: consent of instructor

**CS 525 (3) Real-time and Embedded Systems**

This course provides an overview of embedded and real-time systems and their development. Students will design and build a real-time operation system with a microprocessor to host real-time service data processing using sensor/actuator devices. The course covers design principles, methodologies, design tools and problem solving techniques.

Prerequisite: consent of instructor

**CS 530 (3) Artificial Intelligence**

This course offers an overview of the field of Artificial Intelligence (AI). Basic introductory concepts and a history of the field are covered. Emphasis is placed on the knowledge representation and reasoning strategies used for AI problem solving. Solutions are found using the LISP programming language.

Prerequisite: consent of instructor

**CS 531 (3) Computational Linguistics**

This course presents and overview of the field of computational linguistics. Topics include regular expressions, finite state automata, information theory, context free grammars, hidden Markov models and Viterbi algorithms. Students will work on problems with the field including parsing, machine translation, speech recognition, information extraction and parsing.

Prerequisite: consent of instructor

**CS 533 (3) Data Mining and Machine Learning**

This course offers a blended view of computer science, information science, and statistics for storing, accessing, modeling, and understanding large data sets. Topics include fundamental data mining algorithms: decision trees, classification, regression, association rules, statistical models, neural networks, and support vector machines.

Prerequisite: consent of instructor

**CS 552 (3) Network Protocol Internals**

This course provides advanced coverage of data communication and networking protocols. The course introduces the principles, protocols, and performance evaluation techniques of various advance networking technologies. Topics include error detection and recovery, flow control, routing, data throughput, and performance analysis of existing and emerging Internet protocols.

Prerequisite: consent of instructor

**CS 554 (3) Mobile and Wireless Networks**

This course covers emerging mobile and wireless data networks. The course reviews significant standard wireless protocols (e.g., Bluetooth, IEEE 802.11, RFID, and WAP), and explores technologies for the development of mobile and wireless applications (e.g., J2ME, WML, Brew). Includes research, design, and implementation of a wireless, mobile application.

Prerequisite: consent of instructor

**CS 560 (3) Operating Systems: Design & Implementation**

This course studies the historical and current concepts and implementations of computer operating systems. Basic operating systems topics include processes, interprocess communication, interprocess synchronization, deadlock, memory allocation, segmentation, paging, resource allocation, scheduling, file systems, storage, devices, protection, security, and privacy.  
Prerequisite: CS consent of instructor

**CS 562 (3) Communication Protocols**

Advanced coverage of data communication and networking protocols with an emphasis on protocol design and implementation. Topics addressed will include data transmission methods, error detection and recovery, flow control, routing, data throughput, and performance analysis of existing and emerging Internet protocols.  
Prerequisite: consent of instructor

**CS 565 (3) Graphics and Game Programming II**

The second of a two-course sequence on graphics and game programming. The course concentrates on 3D graphics including modeling, rendering, and animation for computer games and graphic simulations. Programs are created using a current graphics and game development environment.

**CS 570 (3) Compilers**

This course offers an introduction to the specification and implementation of modern compilers. Topics covered include lexical scanning, parsing, type checking, code generation and translation, an introduction to optimization, and compile-time and run-time support for modern programming languages. Students will build a working compiler.  
Prerequisite: consent of instructor

**CS 580 (3) Advanced Programming Practices**

This course covers advanced object-oriented programming for general purpose software development. Topics include tools and processes appropriate for employing object-oriented designs and programming with a significant software development environment and advanced data structures and algorithms, graphical user interfaces, and software development processes.  
Prerequisite: consent of instructor

**CS 581 (3) Software Engineering**

Building upon the introduction provided in CS 300, provides a formal presentation of software engineering concepts. Additional topics include alternative design methods, software metrics, software project management, reuse and re-engineering.  
Admission to course requires instructor consent.

**CS 582 (3) Software Verification**

Provides an introduction to software quality assurance with focus on software testing processes, methods, techniques and tools. Topics include formal verification and validation techniques; black box and white box testing; integration, regression, performance, stress, and acceptance testing of software.

**CS 593 (3) Computer-Based Instructional Systems**

This course provides participants with opportunities to develop, implement, and assess formative and summative evaluation instruments; identify researchable issues in computer-delivered instruction; develop computer-delivered instruction using a sophisticated authoring tool.

**CS 595 (1) Seminar in Computer Science**

Through reading, small group discussion, and presentations, explores the topics not normally covered in the curriculum.  
Prerequisite: consent

**CS 596 (1-4) Selected Topics in Computer Science**

Special topics not covered in other courses. May be repeated for credit on each new topic.  
Prerequisite: consent

**CS 597 (1-12) Internship**

This course is designed to provide students with an opportunity to utilize their training in a real-world business environment. Participants are placed and supervised in selected locations by the internship coordinator for a minimum period of one semester while working under the guidance and direction of a full-time staff member.  
Prerequisite: Completion of core and consent.

**CS 599 (1-2) Individual Study**

Problems on an individual basis. Prerequisite: consent

**CS 600 (3) Research Methods**

Research methodology in general and in computer science. Data and research sources. Analysis of existing research. Preliminary planning and proposals. Conceptualization, design, and interpretation of research. Good reporting.  
Prerequisite: an elementary statistics course

**CS 601 (3) Research Topics**

Special topics in computer science research not covered in other courses. May be repeated for credit on each new topic.

**CS 602 (1) Research Seminar**

Students attend seminar presentations and present a research topic at one of the seminars.  
Prerequisite: consent

**CS 610 (3) Algorithm Analysis**

Brings together fundamental methods in order to provide access to the best method(s) for algorithm usage and analysis.  
Prerequisite: CS 510 or consent of instructor

**CS 611 (3) Theory of Computation**

Computation using Turing machines, logic, oracles, alternating Turing machines, and interactive proof systems. Various aspects of computational complexity including NP-completeness, Co-NP, parallel-complexity theory, their relationships, counting classes, and the polynomial time hierarchy are discussed.  
Prerequisite: CS 510 or consent of instructor

**CS 620 (3) Advanced Computer Organization**

This course will cover concepts and techniques used in modern processor architectures (such as pipelining, superscalar execution, branch system and application software (such as compilers, operating system, database management systems, and network communication).  
Prerequisite: CS 520

**CS 630 (3) Advanced Artificial Intelligence Systems**

This course is a continuation of Artificial Intelligence (CS 530). Emphasis is placed on advanced topics and the major areas of current research within the field. Theoretical and practical issues involved with developing large-scale systems are covered.  
Prerequisite: CS 530

**CS 631 (3) Knowledge-Based Systems**

The design of large-scale, knowledge-based systems. Emphasis on both theoretical and practical issues. Examination of alternative knowledge representation techniques and problem-solving methods used to design knowledge-based systems.  
Prerequisite: CS 530

**CS 660 (3) Operating Systems Theory and Design**

This course will focus on advanced uniprocessor and distributed operating systems. Topics covered will include operating system organization, including monolithic, microkernel, and exokernel; communications, including secure communications protocols, naming, and remote procedure call; file systems, including RAID and journaling; and memory management, including distributed shared memory.  
Prerequisite: CS 560

**CS 662 (3) Data Communications and Networking**

This course will focus on research, design, and analysis of computer networks and data communications systems. The course will also entail detailed examination of modern communication standards, protocol systems and their implementation. Additional topics may include transmission technology, packet switching, routing, flow control, and protocols.  
Prerequisite: CS 562 or 564

**CS 677 (1-4) Individual Study**

Problems on an individual basis. Prerequisite: consent

**CS 680 (3) Software Engineering Project**

Advanced software design, analysis, and development techniques under realistic time and budget constraints. Hands-on project management techniques. Emphasis of concepts through immersion in a team project of significant size.  
Prerequisite: CS 580

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## COUNSELING AND STUDENT PERSONNEL

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### CS 690 (3) Statistical Inference Packages

Statistical package programs used in data collection, transformation, organization, summarization, interpretation and reporting. Statistical description and hypothesis testing with statistical inference. Interpreting outputs. Chi-square, correlation, regression, analysis of variance, nonparametrics, and other designs. Accessing and using large files (U.S. Census data, National Health Survey, etc.)

Prerequisite: a statistics course

### CS 691 (1-6) In-Service in Computer Science

A course designed to upgrade the qualifications of persons on-the-job.

Prerequisite: consent

### CS 694 (1-2) Alternate Plan Paper

Preparation of a master's degree alternate plan paper under the direction of the student's graduate advisor.

Prerequisite: consent

### CS 699 (1-6) Thesis

Preparation of a master's degree thesis under the direction of the student's graduate advisor.

Prerequisite: consent

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## COUNSELING AND STUDENT PERSONNEL MS

*College of Education*

*Department of Counseling and Student Personnel*

107 Armstrong Hall • 507-389-2423

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The need for professional counselors in schools, colleges and social agencies is increasing. The professional counselor is a product of an intensive graduate program which specifically prepares students to take their place in this expanding occupation. The staff of this nationally accredited program are dedicated to offering three challenging specialization areas.

The Council for the Accreditation of Counseling and Related Educational Programs (CACREP), a specialized accrediting body recognized by the American Counseling Association and the Council on Post-secondary Accreditation (COPA), has conferred national accreditation to the following program areas in the Department of Counseling and Student Personnel: Mental Health Counseling, Professional School Counseling, and Student Affairs Practice in Higher Education.

The Department of Counseling and Student Personnel prepares students at the graduate level through the following specialization areas: College Student Affairs, Professional Community Counseling and Professional School Counseling (K-12 licensure). The department also provides service courses for students from a variety of majors within the university for professional development, including an undergraduate course in Decision Making/Career Life. This course is specifically designed to assist students in the decision-making processes that are necessary for effective personal planning.

**Admission.** All applicants should submit the following to the College of Graduate Studies and Research:

1. A completed Application for Graduate Study;
2. Verification of the Baccalaureate degree from a regionally accredited college or university;
3. Two official transcripts listing undergraduate/graduate degree(s) to be sent directly from the degree granting institution to the College of Graduate Studies and Research (including Minnesota State Mankato students, undergraduates, faculty, and staff); and
4. Any additional information required for international students, if appropriate.

Where the GRE or MAT is required (see number 4 below), the applicant must request that the testing institution send the official scores directly to the College of Graduate Studies and Research. Upon receipt of these materials, the College of Graduate Studies and Research will forward the applicant's file to the Department of Counseling and Student Personnel for admission recommendation.

In addition to the College of Graduate Studies and Research requirements, the applicant must submit the following directly to the Department of Counseling and Student Personnel:

1. Three letters of recommendation (forms are available from the Department of Counseling and Student Personnel) focusing on the applicant's academic potential as well as the individual's promise to become an effective counselor/helping professional (if possible one of these recommendations should be from an undergraduate/graduate instructor and/or academic advisor);
2. A completed Personal Statement form (available from the Counseling and Student Personnel department office) summarizing the applicant's experiences and professional goals;
3. The applicant's professional resume or vita;
4. Attainment of a minimum grade point average of 3.0 on a 4.0 scale during the last two years of undergraduate study. If the applicant's GPA is below 3.0, the student must have obtained a minimum GRE score of 900 in the Verbal plus Quantitative subtests and a minimum of 500 in either the Verbal or Quantitative subtest, with an overall minimum GRE score of 1350 for the verbal, quantitative and analytical combined. NOTE: GRE scores must be received in the College of Graduate Studies and Research prior to the applicant's file being forwarded to the Department of CSP for departmental admission recommendation. A student may choose to submit results from the MAT and attain a score of 405 or higher in lieu of the GRE to meet admission requirements.

Admissions will occur summer session and fall semester only. There will be no consideration for admission until all of the above admission criteria have been met. **All materials must be received in the Department of Counseling and Student Personnel office by the posted deadline.** Early application is recommended as enrollment is limited. Applicants will be notified regarding their application status following the receipt of all required application materials. Complete applications will be reviewed starting in February 15.

**Admission does not guarantee continuation in the department, admission to a practicum, internship, or graduation.** As part of the admission process and throughout the program, the student's personal characteristics and professional potential are evaluated. Formalized reviews are conducted at the following times:

1. on completion of the student's Plan of Study (within the first 15 credits of work);
2. during completion of skills acquisition courses;
3. during completion of the pre-practicum application and during the practicum and internship experiences;
4. on completion of comprehensive examinations.

**Graduate Assistantships.** A limited number of graduate assistantships are available to students enrolled in the Department of Counseling and Student Personnel. Graduate assistantships are also available through the Office of Student Affairs at 336 Wigley Administration Center, Phone 507-389-2121 or the Office of Residential Life, 111 Carkoski Commons, Phone 507-389-1011. All graduate assistants must be full-time graduate students. Full assistantships pay a stipend of \$9,000 plus a tuition waiver of up to nine credits a semester. Other types of financial assistance are available through the Office of Financial Aid, 143 Wigley Administration Center, Phone 507-389-1866.

## COUNSELING AND STUDENT PERSONNEL MS

Choose one of the following specialization areas:

### **COLLEGE STUDENT AFFAIRS (50 credits)**

College Student Affairs is a broad program designed to prepare individuals for positions on the college campus in admissions, counseling, financial aid, student housing, student activities, career development and student affairs administration. A comprehensive overview of the field of student affairs is offered with the opportunity to work in several areas. Emphasis is placed on the developmental issues confronting college students, philosophical bases, and the multi-disciplinary foundations of student affairs.

**Required Prerequisite:** A course in statistics.

### **Required Core (39 credits)**

CSP 620	Introduction to College Student Affairs In Higher Education (3)
CSP 622	Adm. in College Student Affairs (3)
CSP 645	Counseling Procedures and Skills I (3)
CSP 647	Crisis Intervention Strategies (3)
CSP 648	Counseling in a Multicultural Society (3)
CSP 658	Career Development I (3)
CSP 662	American College Student (3)

- CSP 664 Managing and Assessing Campus Environments (3)
- CSP 665 Counseling Theories (3)
- CSP 666 Counseling Procedures and Skills II (3)
- CSP 673 Group Counseling (3)
- CSP 681 Practicum in Student Affairs (1)
- CSP 686 Internship I: Student Affairs (2)
- CSP 687 Internship II: Student Affairs (3)

**Required Research (5 or 6 credits)**

- CSP 675 Research and Writing in CSP (3)
- CSP 694 Alternate Plan Paper (2) **OR**
- CSP 699 Thesis (3)

**Required Electives (6 credits)**

Select 6 credits of electives from any 500/600 level course in consultation with an advisor.

**MENTAL HEALTH COUNSELING (60 credits)**

The Mental Health Counseling program prepares individuals through coursework and supervised experience to serve in a variety of clinical settings: mental health centers, family counseling and community agencies; consultation in business and industry settings; career counseling settings; and private practice. Professional preparation includes counseling theories and skills, specialized skills with individuals, groups, and families, assessment and treatment planning, counseling through the life span (children, adolescents, adults, and senior adults), social and cultural factors in counseling, use of technology in counseling, research methods, and supervised clinical experience. .

**Required Prerequisites:**

Statistics, Developmental Psychology and Abnormal Psychology or equivalents.

**Required Core (48 credits):**

- CSP 618 Introduction to Mental Health Counseling (3)
- CSP 645 Counseling Procedures and Skills I (3)
- CSP 648 Counseling in a Multicultural Society (3)
- CSP 650 Child & Adolescent Counseling Techniques (3)
- CSP 652 Counseling Through the Family Life Cycle (3)
- CSP 658 Career Development (3)
- CSP 661 Appraisal Techniques: Mental Health Counseling (3)
- CSP 665 Counseling Theories (3)
- CSP 666 Counseling Procedures and Skills II (3)
- CSP 667 Family Counseling (3)
- CSP 668 Couples Counseling (3)
- CSP 669 Intervention: Treatment Planning and Evaluation (3)
- CSP 673 Group Counseling (3)
- CSP 679 Practicum I: Mental Health Counseling (1)
- CSP 686 Internship I: Mental Health Counseling (2)
- CSP 687 Internship II: Mental Health Counseling (3)
- CSP 689 Technology in Counseling and Student Affairs (3)

**Required Research (5 or 6 credits):**

- CSP 675 Research and Writing in Counseling and Student Personnel (3)
- CSP 694 Alternate Plan Paper (2) **OR**
- CSP 699 Thesis (3)

**Restricted Electives for Licensure (6 credits minimum):**

- CSP 573 Counseling the CD Family (3) **OR**
- CSP 670 Issues in Counseling Women (3)
- CSP 653 Professional Issues in Mental Health Counseling and Family Counseling (3)

**Electives (1 credit minimum)**

- ED 590 Fall Play Therapy Conference (Graduate Credit Option) (1)
- CSP 573 Counseling the CD Family (3) **OR**
- CSP 670 Issues in Counseling Women (3)
- CSP 647 Crisis Intervention Strategies (3)
- CSP 654 Play Therapy Theories and Techniques (3)
- CSP 656 Advanced Play Therapy Theories and Techniques (3)
- CSP 671 Assessment of Intellectual Functioning (3)
- CSP 686 Internship III: Mental Health Counseling (1)

**LICENSURE OPTIONS FOR MS IN MENTAL HEALTH COUNSELING**

licensure requirements vary by state, and state licensing boards may make

changes to these requirements from time to time. Graduate students in the Mental Health Counseling program preparing for licensure should stay current with licensing requirements for the state(s) where they plan to work, and should include this information when seeking academic advising from CSP faculty.

**Licensed Professional Counselor (LPC) or Licensed Professional Clinical Counselor (LPCC)**

The MS in Mental Health Counseling includes the coursework currently required for application to the National Board for Certified Counselors (NBCC) to take the National Counseling Examination (NCE), and the National Clinical Mental Health Counseling Examination (NCMHCE) or Examination of Clinical Counseling Practice (ECCP). These exams are used by Minnesota and a number of states as part of the licensing process for LPC and/or LPCC. Details on current Minnesota LPC/LPCC licensure can be found at the Minnesota Board of Behavioral Health and Therapy website at [www.bbht.state.mn.us](http://www.bbht.state.mn.us). Details on counseling licensure requirements throughout the United States can be found at the American Association of State Counseling Boards website at [www.aascb.org](http://www.aascb.org).

**Licensed Marriage and Family Therapist (LMFT)**

The MS in Mental Health Counseling includes the coursework currently required for application to the Minnesota Board of Marriage and Family Therapy to take the Examination in Marital and Family Therapy (EMFT) offered by the Association of Marital and Family Therapy Regulatory Board (AMFTRB). The EMFT is used by Minnesota and a number of states as part of the licensing process for Licensed Marriage and Family Therapist (LMFT). Details on current Minnesota LMFT licensure can be found at the Minnesota Board of Marriage and Family Therapy Web site at [www.bmft.state.mn.us](http://www.bmft.state.mn.us). Details on MFT licensure requirements throughout the United States can be found at the Association of Marital and Family Therapy Regulatory Board Web site at [www.amftrb.org](http://www.amftrb.org).

**Marriage and Family Counseling Certificate Program (15 credits)**

The Marriage and Family Counseling Certificate Program is designed for persons with a master's degree in a helping profession who want to complete the coursework and clinical training to become Licensed Marriage and Family Therapists (LMFTs). The certificate program meets current coursework requirements for the Minnesota Board of Licensed Marriage and Family Therapists. Most other states and all Canadian provinces follow similar standards.

**Admission:** Applicants should have completed, or be actively completing a master's degree in a helping profession. Applicants must successfully complete a personal interview process with faculty from the Marriage and Family training program. Careful attention will be given to previous work experience, academic background, scholarship, interpersonal skills and commitment to the field of Marriage and Family Counseling/Therapy.

**Prerequisites:** As a part of their existing master's degree, or as a part of additional graduate work, student need to have completed these Professional Mental Health Counseling courses (or equivalent) that meet the Minnesota and national standards for LMFT coursework: CSP 648, CSP 650, CSP 667, CSP 668, CSP 669, CSP 675, and a Clinical Practicum in MFT.

**Required Core Courses** (15 hours of following 18 hours): CSP 573, CSP 652, CSP 653, CSP 654, CSP 670, CSP 677.

**PROFESSIONAL SCHOOL COUNSELING: K-12 (50 credits)**

The Professional School Counseling program prepares individuals for careers as school counselors in K-12 schools. Areas of training include individual and group counseling, crisis intervention, and classroom developmental guidance, all of which are designed to foster the personal, educational, and career development of K-12 students. Particular emphasis is placed on the professional school counselor's role in enhancing the mental health of children and adolescents, as well as the early identification of potential mental health concerns among K-12 students. Training in the use various appraisal instruments, research data, and consultation strategies is also provided.

**Required Prerequisites:**

Statistics and Abnormal Psychology or equivalents. May be taken during the first year of coursework after admission to the program.

**Required Core (45 credits)**

- CSP 645 Counseling Procedures and Skills I (3)
- CSP 647 Crisis Intervention Strategies (3)
- CSP 648 Counseling in a Multicultural Society (3)

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## COUNSELING AND STUDENT PERSONNEL

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CSP	650	Child and Adolescent Counseling Techniques (3)
CSP	655	Mental Health in the Schools (3)
CSP	658	Career Development I (3)
CSP	659	Introduction to Professional School Counseling (3)
CSP	660	Appraisal Techniques: Educational (3)
CSP	665	Counseling Theories (3)
CSP	666	Counseling Procedures and Skills II (3)
CSP	667	Family Counseling (3)
CSP	673	Group Counseling (3)
CSP	674	Developmental Guidance (3)
CSP	679	Practicum: K-12 School Counseling (1)
CSP	686	Internship I: K-12 School Counseling (2)
CSP	686	Internship II: K-12 School Counseling (3)

### Required Research (5 or 6 credits)

CSP	675	Research and Writing in CSP (3)
CSP	694	Alternate Plan Paper (2) <b>OR</b>
CSP	699	Thesis (3)

Strongly recommended, but not required: Counseling Chemically Dependent Families (CSP 573) and a course in Special Education (in consultation with an advisor).

**Adding Areas to Existing Licensure.** The Professional School Counseling program makes efforts, on a space-available basis, to respond to the needs of current licensed practitioners who wish to add additional grade-level areas to an existing school counselor license. Consultation with program faculty is required to determine specific coursework necessary to fulfill licensure requirements.

The Minnesota Board of Teaching allows individuals with existing master's degrees to take coursework in a school counseling program leading to licensure in the field. Such individuals should consult with a member of the Professional School Counseling Program as to the number of courses required to lead to licensure by the state of Minnesota.

**Licensure for Non-Educators.** The Minnesota Board of Teaching allows individuals without teaching licenses to take coursework in a school counseling program leading to licensure in the field.

Individuals without a teaching license or experience are strongly recommended to take coursework in the teaching sciences during their studies in the Professional School Counseling Program. Course selection should only be undertaken in consultation with an advisor. Evidence of such coursework on a non-teacher licensed individual's transcript and resumé provides evidence of efforts to familiarize oneself with K-12 educational strategies and enhances employment prospects in the job market.

**Special Admission Notice for Professional School Counseling Candidates.** Due to the large number of individuals who annually apply to the Professional School Counseling Program, applicants are strongly advised to submit application materials as early as possible. Admission review priority is given to those whose completed files reach the program as soon as possible. Priority is given to those individuals seeking full-time admission.

The program is dedicated, as well, to working with the part-time student. All courses in the program are offered at night, late afternoon, or in the summer at least once during each two-year cycle of classes.

### DOCTORAL PROGRAM

The Doctor of Education (Ed.D.) program in Counselor Education and Supervision addresses the professional development needs of counseling and student affairs professionals who seek a Doctoral degree in order to (a) obtain college teaching positions in counselor education; (b) advance or enrich their careers in counseling and student affairs; (c) become license-eligible; (d) position themselves for supervision and leadership roles within the counseling and student affairs professions; and/or (e) upgrade and expand their clinical skills to prepare for specialized positions in advanced counseling practice. Course content and clinical experiences build upon the education of Master's prepared counselors and student affairs professionals already practicing in a variety of advanced roles (e.g., educator, administrator, clinical supervisor, guidance director). The curriculum, which is structured around the Council for the Accreditation of Counseling and Related Educational Programs (CACREP) standards for Doctoral programs, focuses upon the development of advanced competencies for increasingly complex professional practice, faculty, and leadership roles. The program emphasizes both advanced practice preparation and applied research.

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### COURSE DESCRIPTIONS

#### CSP 570 (3) Group Procedures

Strategies for establishing a group. A review of concepts related to group membership, group member roles, and group techniques, therapeutic factors, and leadership roles. An experiential component is included in this course.

Prerequisite: CSP 4/571

#### CSP 571 (3) Interpersonal Helping Skills

Provides the developing helping professional with an introduction to basic helping skills: attending, listening, responding to content and affect, probing, and providing feedback. The course is experiential in nature and includes small group interaction, videotaping, and role playing simulations.

#### CSP 573 (3) Counseling the Chemically Dependent Family

Understanding the impact of chemical dependency on the family. Family counseling skills and relapse prevention strategies will also be included.

Prerequisite: CSP 4/571 or 645

#### CSP 591 (1-4) In service

#### CSP 618 (3) Introduction to Mental Health Counseling

Philosophies and strategies of professional counseling. Overview of counseling literature, field of counseling, and development of the professional counselor.

#### CSP 620 (3) Introduction to College Student Affairs in Higher Education

Students will explore the functional areas represented by the student affairs profession and will examine current issues and problems facing student affairs and higher education. Philosophical and historical underpinnings of the student affairs profession will also be examined.

#### CSP 622 (3) Administration in Student Affairs

Current theories and practices in the administration of student affairs programs in higher education. Includes: theories of leadership, management, and change; models of planning, budgeting, staffing, and evaluation. Current issues and trends are also explored.

Prerequisite: CSP 620

#### CSP 645 (3) Counseling Procedures & Skills I

Focus on helping skills model, professional issues, and skill acquisition of basic listening responses.

Prerequisite: CSP 665, or take concurrently

#### CSP 647 (3) Crisis Intervention Strategies

A combination of classroom lecture and interaction with community professionals involved in crisis intervention. Designed to give students practical experience in distinguishing between crisis intervention, theory, and practice.

#### CSP 648 (3) Counseling in a Multicultural Society

This course is specific to the counseling profession, focusing on both the cultural and sociopolitical forces influencing people in a multicultural society, as well as the microskills necessary for engaging in cross-cultural counselor-client interactions.

#### CSP 650 (3) Child and Adolescent Counseling Techniques

Provides an overview of theory, research, and practice regarding counseling with children and adolescents. Developmentally and culturally appropriate counseling strategies are stressed. Relevant current topics are examined.

#### CSP 652 (3) Counseling Through the Family Life Cycle

Theories of human development and the family cycle are presented as the basis for multi-contextual assessment, case conceptualization, and treatment skills when working with contemporary families.

#### CSP 653 (3) Professional Issues in Mental Health Counseling and Family Counseling

An overview of professional issues for mental health counselors providing marriage and family counseling, including certification/licensure, professional development, ethical guidelines, multicultural issues, and recent developments in theory, research, and practice.

#### CSP 654 (3) Play Therapy Theories and Techniques

Major theories of play therapy and play therapy techniques are reviewed and ap-

plied to a range of mental health, learning, and developmental needs of children. Readings, lectures, class demonstrations, and role-play experiences are included.

### CSP 655 (3) Mental Health in the Schools

This course provides an overview of mental disorders and disabilities impacting children and adolescents, with particular attention devoted to early identification and intervention in a school setting.

### CSP 656 (3) Advanced Play Therapy Theories and Techniques

Students through classroom and online experiences will learn the theoretical bases and therapeutic strategies for individual, group, and family interventions for play therapy theories including Ecosystemic, Developmental, Filial, Gestalt, Experiential, and Family Play Therapy.

### CSP 658 (3) Career Development I

Overview of theories of career development, career guidance, career choice, and decision-making. Career counseling interviews and assessment techniques are also emphasized.

Prerequisite: CSP 645 and 665, or concurrently

### CSP 659 (3) Introduction to Professional School Counseling

Roles and functions of the professional school counselor in a school setting. Survey of guidance programs and services.

### CSP 660 (3) Appraisal Techniques: Educational

Nature and use of measurement tools in counseling with particular emphasis on representative standardized tests, norms, and basic research procedures.

Prerequisite: permission from instructor

### CSP 661 (3) Appraisal Techniques in Mental Health Counseling and Family Counseling

Basic appraisal principles and applications of projective and objective personality assessment tools in counseling practice.

Prerequisite: permission from instructor

### CSP 662 (3) American College Student

Provides theoretical and outcomes perspectives on human development during the college years. Includes the theory and application of developmental perspectives on gender, race, ethnicity, religion, age, and sexual orientation. Application to college student affairs programs is stressed.

### CSP 664 (3) Management & Assessment of Campus Environments

Provides the developing student affairs practitioner with an understanding of the dynamic relationship between students and the college environment. Includes the study of physical, social, and organizational environments and the assessment of environmental impact on students' development.

Prerequisite: CSP 662

### CSP 665 (3) Counseling Theories

A review and analysis of major counseling theories coupled with empirical support and specific counseling theory techniques and theoretical case analysis.

### CSP 666 (3) Counseling Procedures & Skills II

Emphasis on knowledge and skill acquisition of advanced listening responses, helping interventions, and counseling strategies.

Prerequisite: CSP 645

### CSP 667 (3) Family Counseling

Overview of family theories and family functioning. Focus on techniques and skills to address issues of contemporary families.

Prerequisite: CSP 645, 666, 665

### CSP 668 (3) Couples Counseling

Overview of major theories of couples counseling; skill and strategies for effective couples counseling and case analysis.

Prerequisite: CSP 665, 666

### CSP 669 (3) Intervention: Treatment Planning/Evaluation

Fundamentals of treatment plan development in counseling, with particular focus on the integration of personality assessment, intake interviewing and diagnostic classification data.

Prerequisite: CSP 661

### CSP 670 (3) Issues in Counseling Women

This course provides an introduction to the developmental, socio-cultural, and psychological issues unique to women and explores the ways in which such issues affect women's mental health. The course includes an introduction to the basic helping skills necessary to effectively respond to women's developmental and mental health needs.

### CSP 671 (3) Assessment of Intellectual Functioning

This course will provide students with an awareness of best practices and current issues in the assessment of intellectual functioning. Students will receive introductory training in the administration, interpretation, and responsible use of selected intellectual assessment measures.

### CSP 673 (3) Group Counseling:

Provides students with an understanding of the dynamics and therapeutic elements of group counseling, as well as group development theories and group leadership styles. An experiential component is included to provide an opportunity for students to personally experience the process of group development.

Prerequisite: CSP 665, 645

### CSP 674 (3) Developmental Guidance

Developmental needs and characteristics of children and adolescents. School guidance programs and interventions that respond to these needs.

Prerequisite: permission from instructor; CSP 679; taken in conjunction with Internship I: K-12 School Counseling

### CSP 675 (3) Research and Writing in Counseling and Student Personnel

The primary product of the course will be a scholarly review of literature on a topic mutually acceptable to the student, the faculty advisor, and the instructor of the course. Students will learn to effectively analyze and utilize the results of research in their chosen field.

### CSP 676 (3) Workshop Design & Development

Skills and knowledge base of critical components of workshop design.

Prerequisite: permission from instructor

### CSP 677 (1-4) Individual Study

Individual study focusing upon a curricular or instructional topic under the direction of graduate faculty.

Prerequisite: consent

### CSP 679 (1-4) Practicum I in Counseling

Supervised practicum experiences. Admission by prior application.

Prerequisite: permission from instructor

### CSP 680 (1-4) Practicum II in Counseling

Supervised practicum experiences. Admission by prior application.

Prerequisite: permission from instructor

### CSP 681 (1-4) Practicum Student Affairs

Supervised practicum experience in Student Affairs. Admission by prior application.

Prerequisite: permission from instructor

### CSP 686 (1-4) Internship I

Supervised integrative experience. Admission by application only.

Prerequisite: permission from instructor

### CSP 687 (1-4) Internship II

Supervised integrative experience. Admission by application only.

Prerequisite: permission from instructor

### CSP 688 (1-4) Internship III

Supervised practical integrative experience. Admission by application only.

Prerequisite: permission from instructor

### CSP 689 (3) Technology in Counseling & Student Affairs

The course provides an introduction to the use and applications of hardware and software in the fields of counseling and student affairs. The course is based on the technology standards that are identified by the Association of Counselor Educators and Supervisors (ACES) and the literature on the application of technology to the fields of counseling and student affairs.

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## COUNSELING AND STUDENT PERSONNEL

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### **CSP 690 (3) Clinical Supervision: Theory and Practice**

A didactic and experiential course that meets guidelines for approved supervisor status for counselors and family therapists, with topics that include the history and philosophy of supervision, social and cultural contexts, supervision models and dynamics, approaches for individual and group supervision, technology in supervision and legal and ethical guidelines in supervision.

### **CSP 694 (2) Alternate Plan Paper**

### **CSP 699 (3-6) Thesis**

For students desiring to conduct experimental applied research in their graduate specialization's career.

Prerequisite: permission from advisor.

### **CSP 720 (3) Contemporary Issues in College Student Affairs**

Provides a broad understanding of contemporary issues affecting college students, student affairs practice, and higher education. Prepares students to analyze current information about higher education and to understand the historical, contemporary, and future relevance of current issues in student affairs practice.

### **CSP 722 (3) Organization and Governance in Higher Education**

This course introduces students to a variety of perspectives on organizational behavior as well as classical and contemporary theories of organization as they relate to the field of higher education.

### **CSP 723 (3) Budgeting and Finance in Higher Education**

Provides prospective college and university administrators with both a theoretical and working knowledge of techniques, issues, policies, and practices related to the financial management of higher education institutions in the United States.

### **CSP 729 (3) Ethical and Legal Issues in Counselor Education and Supervision**

This course provides counseling professionals with an understanding of the dynamics of the legal system; common legal and ethical dilemmas facing counselors, and strategies for facilitating and maintain.

### **CSP 730 (3) Ethical and Legal Issues in the Schools**

This course provides school counseling professional with an understanding of: the dynamics of the school legal system; common legal and ethical dilemmas facing school counselors and strategies for facilitating and maintaining ethical and legal decision making processes within the schools.

### **CSP 731 (3) Legal Issues in Higher Education**

This course provides student affairs professionals with an understanding of: the dynamics of the legal system; common legal areas in post-secondary education; legal terminology; the analysis and processing of decision making related to laws which guide institutional operations in colleges and universities.

### **CSP 732 (3) Diversity in Higher Education**

This course is designed to develop the ability to critically evaluate the issues of diversity in higher education especially as they relate to the role of Student Affairs. The course examines the efforts to promote diversity in higher education, the role of student affairs profession in these efforts, initiatives to promote and sustain organizational diversity and the major challenges such efforts encounter.

### **CSP 748 (3) Diversity in Counselor Education & Supervision**

This course is designed to encourage counselors to critically examine in greater depth issues and the research in the field of multicultural counseling. The course will examine more depth the cultural context of issues in a pluralistic society as they relate to culture, ethnicity, nationality, age, gender, sexual orientation, mental and physical characteristics, education, religious and spiritual values, and socioeconomic status.

### **CSP 758 (3) Advanced Career Development**

This course is designed to provide students with more in-depth examination of the field of career development and career counseling. Major theories, assessments and techniques in field will be discussed. Students will also conduct an in-depth examination of the current trends, issues and resources in the area of career development.

### **CSP 759 (3) Contemporary Issues in School Counseling**

This course provides students with an understanding of current and emerging professional issues impacting the school counseling profession. Students will develop an appreciation for the historical roots of contemporary issues and the variety of issues impacting school counselors.

### **CSP 762 (3) Advanced Theories of College Student Development**

Examines patterns of intellectual, identity, psychosocial, spiritual, and emotional development among older adolescents and adults, especially as they relate to desired learning and development outcomes of post secondary education.

### **CSP 765 (3) Advanced Counseling Theories and Techniques**

The course is designed to allow doctoral candidates the opportunity to further explore and expand their "self-as-instrument" theoretical base. Candidates will pursue in-depth analysis of specific theoretical orientations in developing their own "best fit" approach to working with clientele.

### **CSP 767 (3) Advanced Family Counseling**

An advanced review and application of major family counseling theories in clinical practice, clinical supervision, and counselor education, with emphasis on social/contextual factors, challenges faced by contemporary families, self-of-therapist, and legal/ethical guidelines.

### **CSP 769 (3) Advanced Assessment and Treatment Planning**

Didactic and skills based course that covers multimodal assessment and diagnosis of psychological disorders. Emphasis on using assessment results to plan evidence-based interventions and monitor treatment outcomes.

### **CSP 772 (3) Counseling and Addictions**

Counseling and Addictions is designed to provide doctoral candidates the opportunity to learn about the mechanics of biochemical and cognitive addictions and their impact on wellness. Addiction is framed as an impediment to the client's achievement of potential, not as pathology.

### **CSP 773 (3) Advanced Group Counseling**

This course is designed to assist doctoral students in developing knowledge and skills in the domains of advanced group counseling practice, supervision of group leaders, research in group counseling, and teaching group counseling courses.

### **CSP 774 (3) School Consultation with Individuals and Systems**

School Consultation with Individuals and Systems is designed to provide doctoral candidates with the tools necessary to make effective analyses and recommendations within various models of consultation. Specific emphasis is placed on candidates' making accurate consultations within the context of institutional and individuals systems models.

### **CSP 775 (1-4) Research Seminar**

The purpose of this course is to assist students in developing the skills to conduct program evaluations and original research in the fields of counseling and student affairs. Students will use this course to begin work on their dissertation proposals.

### **CSP 776 (3) Intermediate Statistics**

This course is designed to provide students with an understanding of the statistical techniques used in fields of counseling and student affairs. The course will emphasize a conceptual understanding of statistical methods and practice analyzing data with a statistics package.

### **CSP 778 (3) Quantitative Research Methods**

This course provides an overview of quantitative research methods in counseling and student affairs. Topics include sampling, measurement and instrumentation, design, and analysis. The course provides a conceptual understanding of quantitative research methods.

### **CSP 779 (3) Advanced Counseling Practicum**

Advanced Counseling Practicum is designed to provide doctoral candidates with experiential opportunities to expand their practice and supervision skills. The focus of the course is on candidates' utilization of existing knowledge and skills in their respective counseling practice area.

### **CSP 780 (3) Qualitative Research Methods**

This course is intended to introduce doctoral level students to the variety of methodologies within qualitative research, the proper way to determine the methodology that is most appropriate for the research, and the ways in which to collect and interpret data.

### **CSP 786 (3) Advanced Counseling Internship**

Advanced Counseling Internship is designed to provide doctoral candidates with additional practice and supervision skills based on successful completion of Advanced Practicum (CSP 779). The focus of the course remains on enhancing

candidates' utilization of existing knowledge and skills in their respective counseling practice area.

### CSP 790 (3) Supervision in Counselor Education

A didactic and experiential course for doctoral program students to meet guidelines for approved supervisor status for counselors and family therapists. Topics include historical foundations, supervision models and dynamics, social and cultural contexts, individual and group supervision, technology in supervision, and legal/ethical guidelines. Course includes a mentoring experience in supervision and the writing of a philosophy of supervision paper.

### CSP 794 (1-4) Dissertation

The successful completion of an approved dissertation that contributes to the field of Counselor Education and Supervision. Must be repeated for a minimum of 12 semester hours (we require 12 credits for dissertation). Students may register for dissertation credits over several semesters. As per the requirement of the Graduate College, students must register for at least one credit during the semester they intend to graduate.

Prerequisites: Doctoral candidacy. Successful completion of core counseling courses, core research courses, successful completion of comprehensive exam and approval of doctoral advisor.

## CREATIVE WRITING MFA

College of Arts & Humanities  
Department of English  
230 Armstrong Hall • 507-389-2117

See **ENGLISH**

## CROSS-DISCIPLINARY STUDIES MS

The MS program in Cross-disciplinary Studies permits students to combine courses from two academic areas, and is designed for the highly motivated, self-directed student whose personal, educational, and/or career goals require an educational experience that might not be provided by a graduate program with a single area of emphasis. One primary academic discipline provides two-thirds of the total number of credits, with courses from a second academic area constituting the remaining one-third of the program. A student may complete 30 credit thesis program or 34 credit alternate plan paper (APP) or, if applicable, another 34 credit capstone project program. A listing of available graduate programs that you might select for a primary or secondary field of study can be found at <http://grad.mnsu.edu/programs/>.

At this time, the College of Business and the Department of Social Work are not participating in the Cross-disciplinary Studies Program. The Counseling and Student Personnel program can serve only as a secondary program within the Cross-disciplinary Studies program.

Because every admitted student will have a unique individualized academic program, it is essential that strict program requirements and policies be enforced. Please read the follow program requirements prior to starting the application process.

### Application Considerations

1. Applicants to the cross-disciplinary studies program are expected to complete the Minnesota State Mankato graduate application form, submit the required application fee, and complete a program Plan of Study. Applicants to the program must have earned a baccalaureate degree from a regionally accredited college or university, or the overseas equivalent. International students must submit the additional documents required for international applicants. All application documents and graduate policies are available on the web pages of the College of Graduate Studies and Research.
2. Applicants must have earned an undergraduate grade point average of at least a 3.0.
3. Applicants must provide all of the application credentials required to apply to the primary discipline's graduate degree program. For example, if the primary academic discipline requires the GRE for consideration for admission

to the graduate degree program, then the interdisciplinary studies applicant would also be expected to submit GRE results. Requirements for graduate degree programs are posted on the web pages of the College of Graduate Studies and Research.

4. Each applicant must provide a statement of at least 300 words that informs the admissions committee of the applicant's personal and professional goals, and that also addresses why an existing graduate program offered by Minnesota State Mankato does not meet these goals.
5. The applicant must provide a brief synopsis of how each suggested course included in the Plan of Study will assist him/her in achieving the goals mentioned in the required essay. Course descriptions are available in the Graduate Bulletin on the College of Graduate Studies and Research web page.
6. Provisional admission to the program is not permitted. All undergraduate deficiencies must be completed prior to being admitted to the graduate program.
7. The application must be approved by Graduate Coordinators of each of the selected academic departments and by the College of Graduate Studies and Research. If one member of this group does not endorse the application, the applicant will be notified and alternatives will be suggested.

### Checklist of Required Application Documents

- Two-page graduate application form
- Proposed Plan of Study
- 300 word statement of objectives, including why an existing Minnesota State Mankato graduate program does not currently meet your needs.
- Explanation of how each proposed course will assist you in reaching the goals discussed in your essay
- Application fee
- International applicants must submit additional credentials and documents.
- Additional application credentials required by the primary academic program.

## CROSS-DISCIPLINARY STUDIES MS

(Thesis Plan - 30 credits)

(Alternate Plan Paper - 34 credits)

### Program Considerations

1. Fifty percent of the credit in the program (excluding thesis, APP, or other capstone project credits) must be completed at the 600 level. At least one 600 level course must be completed within each selected academic discipline.
2. A research methods course must be completed as part of the degree program. Students must select a research methods course offered by their primary academic area.
3. No more than three credits of independent study may be used to complete the program.
4. The primary academic program must be a program that offers a graduate degree at Minnesota State University, Mankato. The admitted student's initial advisor will be assigned by the Graduate Coordinator of the primary academic area. The student's committee shall be composed of two graduate faculty members from the primary academic program, and one member from the secondary program. Exceptions to this policy must be approved by the student's advisor. The Plan of Study submitted as part of the application will be considered the official plan of study unless changes are approved by all committee members.
5. Students must complete the graduate degree capstone experience requirements of the primary academic program. The capstone experiences must include concepts and research gleaned from both of the student's selected academic disciplines.
6. All graduate students should be familiar with the current policies of the College of Graduate Studies and Research. These policies, including the six year time limit to complete the degree, are available in the Graduate Bulletin, located on the web pages of the College.
7. Students completing a thesis are expected to complete at least thirty appropriate credits. Students who do not write a thesis must complete at least thirty-four approved credits.

**CURRICULUM & INSTRUCTION SPECIALIST**313 Armstrong Hall • 507-389-5710

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The Specialist Degree in Curriculum and Instruction prepares curriculum coordinators, special education directors and classroom teachers in their area of competency. Students may choose to specialize in any of the following areas: early childhood, elementary, secondary, general, or a subject matter specialty. The Specialist degree consists of 30 credits in approved graduate coursework, of which there will be 6 credits of Research, including a thesis, 8 credits of course work in curriculum and instruction, 3 practicum credits, 8 credits of related field courses, and 5 credits of electives to be selected with consent of the major advisor. Students may also choose the Curriculum and Instruction: Physical Education program, offered in conjunction with the Human Performance Department.

**Admission.** For admission, applicants for the Specialist's degree must have earned a Master's degree in an education-related area from an accredited college or university, and have a minimum grade point average of 3.0 or a score of 500 on the verbal, quantitative, or analytical portions of the aptitude portion of the Graduate Record Examination. The Miller Analogies Test may be taken in place of the Graduate Record Examination. They must have a valid Minnesota teaching license and submit letters of recommendation to the department. Contact the department for further information.

**CURRICULUM AND INSTRUCTION SPECIALIST**

(Thesis Plan - 30 credits)

**Required Research Core (6 credits)**

KSP 681	Quantitative Research (3)	OR
SPED 601	Quantitative Research (3)	OR
KSP 682	Qualitative Research (3)	OR
SPED 602	Qualitative Research(3)	AND
KSP 579	Grant Writing and Program Funding (3)	
KSP 699	Thesis (3)	

**Required KSP Courses (8 credits)**

Choose 8 credits of 500-600 level KSP courses chosen in consultation with an advisor.

**Required Practicum Course (3 credits)**

KSP 660	Practicum (3)
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**Related Area Elective Courses (credits)**

8 elective credits in related academic area, chosen in consultation with an advisor.

**Electives (5 credits)**

Choose any 500-600 level elective courses chosen in consultation with an advisor.

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**ECONOMICS**

*College of Social & Behavioral Sciences  
Department of Economics  
150 Morris Hall • 507-389-2969*

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Students may use economics courses as electives in other programs or as part of a Cross-disciplinary Studies program.

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## COURSE DESCRIPTIONS

**ECON 503 (3) Labor Economics**

Employment, wages, and economic security. The structure and impact of labor organizations and labor legislation.  
Prerequisite: ECON 201 and 202

**ECON 504 (3) Economics of Human Resources**

Quantitative and qualitative aspects of human resources; human capital; changing population structure; economic decisions within the household; intergenerational transfers; earnings differentials by race and gender; pensions and social security; public policy towards human resources.  
Prerequisite: ECON 201,202

**ECON 505 (3) Central Banking**

A detailed examination of the Federal Reserve System and monetary policy. The topics will include a history of the Federal Reserve and its monetary tools and strategies: Monetarism, the demand for money, the money supply process, and the impact of financial deregulation on federal policy.  
Prerequisite: ECON 305

**ECON 506 (3) Collective Bargaining**

Emphasis on philosophy, structure, process of negotiation, grievances, arbitration, important developments and trends, and economic impact of collective bargaining.  
Prerequisite: ECON 201 and 202

**ECON 508 (3) Government Regulation of Labor Relations**

An historical review of the past public policy concerning labor organizations, an analysis of the economic causes and effects of the negotiations of labor, current economic problems in labor legislation, and the role of federal and state governments in the industrial relations.  
Prerequisite: ECON 201 and 202

**ECON 510 (3) Quantitative Analysis in Economics**

This course will introduce the student to the use of mathematics in economic analysis. Topics include equilibrium analysis, metric algebra and linear models, comparative statistics and derivatives, optimization, dynamics and integration, and first-order differential equations.  
Prerequisite: ECON 355, 356, 207, and MATH 112

**ECON 511 (3) Urban Economics**

Economics forces which account for the development of cities and application of principles to some of the major problems of the modern urban community.  
Prerequisite: ECON 201 and 202

**ECON 512 (3) Resource & Environment Economics**

Concepts and techniques for evaluating the alternative uses, management and development of natural resources.  
Prerequisite: ECON 201 and 202

**ECON 516 (3) Sports Economics**

This course examines the economics of professional and collegiate sports and sports institutions. Students examine the market for sports competitions, the labor market for player talent, and the role government plays in the business of sports.  
Prerequisite: ECON 202

**ECON 520 (3) International Economics**

The economic rationale for interregional trade: emphasis on current problems.  
Prerequisite: ECON 201 and 202

**ECON 525 (3) Social Control Economic Activity**

Considers the role of government in the implementation of social values such as freedom, equality, efficiency, and justice in those areas where markets are imperfect or fail. Theoretical, historical, and philosophical treatment of these issues as manifested in the development of the antitrust laws and economic and social regulation.  
Prerequisite: ECON 201 and 202

**ECON 529 (3) Economic Education**

Fundamental ideas and structure of economics with emphasis on the application of such ideas in the K-12 school curriculum.

**ECON 540 (3) Public Finance**

Public expenditures, taxes and other revenues, debts and financial administration at federal, state, and local levels.  
Prerequisite: ECON 201 and 202

**ECON 545 (3) Survey of Economic Ideas**

A survey and analysis of the development of economic ideas treated in historical perspective.  
Prerequisite: ECON 201 and 202

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**ECON 546 (3) American Economic Development**

An examination of major trends and events of U.S. history from colonial times to the present using tools of economic analysis. Major topics include the role of transportation, economic impact of the Civil War, the role of government in the economy, trends in money and banking, and the Great Depression.

Prerequisite: ECON 201 and 202

**ECON 550 (3) Economic Development**

Economic underdevelopment and the relationships between mature economies and developing nations.

Prerequisite: ECON 201, 202

**ECON 562 (3) Econometrics**

The study of methods and techniques for building econometric models with the goal of forecasting and measurement of the economic relationships by integrating economic theory and statistics in it.

Prerequisite: ECON 201, 202, and 207

**ECON 563 (3) Applied Econometrics of Financial Markets**

This course is designed to cover basic tools in time series analysis and to equip students with quantitative skills to analyze the financial market.

**ECON 571 (3) Economics, Ethics, & Society**

Analysis of theoretical constructs of society and economics. Specific attention will be given to economic questions which have a specific relationship to policy questions and the discrimination of values.

Prerequisite: ECON 201 and 202

**ECON 580 (1-3) Seminar: Economics**

Prerequisite: ECON 201 and 202

**ECON 605 (3) Managerial Economics**

To develop and integrate principles and ideas from economics and business and to apply them to management-making decisions and policy formulation within the firm.

Prerequisite: ECON 201 and 202

**ECON 606 (3) Applied Macroeconomics**

Application of macroeconomics models to analyze current consumer investment and foreign trade behavior. Emphasis on effects of government policy upon interest rates, taxes, foreign trade, the distribution of income and wealth, and the impact of a changing population.

Prerequisite: ECON 201 and 202

**ECON 622 (3) Statistical Analysis for Business/Research**

A comprehensive course in research design in business and in the application of statistical methods in business decision making. Data files handling and data analysis using mainframe and PC based computer packages such as SPSS will be integrated and emphasized throughout the course.

Prerequisite: ECON 207, and MATH 112

**ECON 655 (3) Microeconomic Theory**

This course provides the student with an understanding of microeconomic theory. Among the topics covered are optimization, consumer theory, the theory of production and the firm, perfect and imperfect competition, monopoly, factor markets, economic efficiency and market failure, social choice theory, and social welfare.

Prerequisite: ECON 355 and 510

**ECON 656 (3) Macroeconomic Theory**

This course provides the student with an understanding of macroeconomic theory. Among the topics covered are goals and measurement, business cycles, aggregate demand and supply, Classical and Keynesian analyses, and stabilization theory and policy.

Prerequisite: ECON 356 and 510

**ECON 660 (1-3) Seminar: Economics****ECON 670 (1) Alternate Plan/Thesis Proposal Seminar**

Designed for students engaged in meeting the thesis/alternate plan paper requirement for the MBA degree. Each student will select, outline, research, and present a proposal on the paper/thesis they will write. Advisor's permission and a submitted plan of study are required for enrollment.

Prerequisite: ECON 622

**ECON 677 (1-3) Individual Study**

Prerequisite: ECON 201 and 202

**ECON 680 (2) Cost-Benefit Analysis**

This course provides the student with an understanding of the application of economic analysis to the evaluation of private projects and public programs. Among the topics covered are the theory and practice of cost-benefit analysis, the evaluation of private projects and public programs, shadow prices, economic and environmental impact studies, and regulatory issues.

Prerequisite: ECON 355

**ECON 681 (1-3) Readings in Economics****ECON 694 (1) Alternate Plan Paper****ECON 698 (1-5) Internship****ECON 699 (3) Thesis****EDUCATIONAL LEADERSHIP MS****EDUCATIONAL LEADERSHIP SPECIALIST****EDUCATIONAL LEADERSHIP Ed.D.****EXPERIENTIAL EDUCATION MS**

*College of Education*

*Department of Educational Leadership*

115 Armstrong Hall • 507-389-1116

Web site: <http://ed.mnsu.edu/edleadership/>

The mission of the Department of Educational Leadership is to prepare and renew leaders and to provide unique, personalized opportunities for meeting Master of Science and Specialist degree requirements. The Department of Educational Leadership provides Master of Science degrees in Educational Leadership and Experiential Education. The Department also offers Specialist degrees in Educational Administration and Educational Leadership. Licensure programs are available for principals, superintendents, special education directors, and community education directors.

**Admission.** Complete the general admission requirements of the College of Graduate Studies and Research.

**EDUCATIONAL LEADERSHIP MS (34 credits)****Required Leadership Core (9 credits)**

EDLD 651 Seminar: Ethics and Leadership (3)  
EDLD 652 Seminar: Leadership Studies (3)  
EDLD 647 Seminar: Organizational and Systems Change (3)

**Required Research Core (4 credits)**

EDLD 634 Practicum (1-6 credits)  
EDLD 688 Project Demonstration (capstone) (1-3)  
EDAD 692 Research in Educational Leadership (3)

**Electives**

Choose 500/600 level electives in consultation with an advisor. Minimum 24 credits total must be in the Department of Educational Leadership.

**DIRECTOR OF COMMUNITY EDUCATION, LICENSURE MS (34 credits, minimum)**

To earn this licensure in Minnesota, there is a Human Relations course required. If that requirement has not been satisfied for a Minnesota teaching license, then it must be done prior to completion of this program. It is an undergraduate course and does not count for this program.

**Required Leadership Core (9 credits)**

EDLD 651 Seminar: Ethics and Leadership (3)  
EDLD 652 Seminar: Leadership Studies (3)  
EDLD 647 Seminar: Organizational and Systems Change (3)

## EDUCATIONAL LEADERSHIP

### Required Research Core (3 credits)

EDAD 692 Research in Educational Leadership (3)

### Required Educational Administration Courses (10 credits)

EDAD 633 School Administration (beginning of program) (3)  
EDAD 670 Situational Observation (Capstone) (3)  
EDAD 698 Internship (4)

### Elective Administration Courses (12 credits)

EDAD 648 School Public Relations (3)  
EDAD 652 Structure/Governance/Trends (3)  
EDAD 654 Theory and Practice in Supervision (3)  
EDAD 663 School Business Management (prerequisite 664) (2)  
EDAD 664 School Finance (3)  
EDAD 665 School Law (3)  
EDAD 668 Human Resource Management (2)  
EDAD 681 Planning and Facilities Management (3)

### K-12 PRINCIPAL (30 credits minimum)

#### Required Courses (21 credits)

EDAD 633 School Administration (Portfolio Development) (recommended first year) (3)  
EDAD 654 Theory and Practice in Supervision (3)  
EDAD 665 School Law (3)  
EDAD 682 Seminar: Field Study Design (3)  
EDAD 698 Internship (6) (3 credits elem., 3 credits sec.)  
Admission by application, one semester in advance  
Prerequisites: EDAD 633 plus at least 12 additional credits plus Official Plan of Study on file.  
EDAD 670 Situational Observation (3) (final semester, Capstone)  
Admission by application, one semester in advance  
Prerequisites: EDAD 698 completed or in final semester.

#### Electives Courses (9 credits)

EDAD 648 School Public Relations (3)  
EDAD 652 Structure/Governance/Trends (3)  
EDAD 664 School Finance (3)  
EDAD 681 Planning and Facilities Management (3)  
EDAD 699 Thesis (3-4\*)

#### Leadership Core

(Take one of the following, unless 3 courses were included in the master's degree)  
EDLD 647 Seminar: Organizational and Systems Change (3)  
EDLD 651 Seminar: Ethics and Leadership (3)  
EDLD 652 Seminar: Leadership Studies (3)  
EDLD 653 Seminar: Women in Leadership (3)

### DIRECTOR OF SPECIAL EDUCATION (30 credits minimum)

Prerequisites: Master's Degree in Special Education or Equivalent

#### Required Courses (12 credits)

EDAD 633 School Administration (Professional Plan Development) (recommended first year) (3)  
EDAD 682 Seminar: Field Study Design (3)  
EDAD 698 Administrative Field Experience (Internship) (3\*)  
\*Plan with your advisor. Admission by application, one semester in advance  
Prerequisites: EDAD 633 plus at least 12 additional credits.  
EDAD 670 Situational Observation (3\*) (final semester, Capstone)  
\*Plan with your advisor  
Admission by application, one semester in advance  
Prerequisite: EDAD 698

#### Content Courses Select from the following EDAD courses (18 credits)

EDAD 648 School Public Relations (3)  
EDAD 652 Structure/Governance/Trends (3)  
EDAD 654 Theory and Practice in Supervision (3)  
EDAD 659 Seminar: School Administration (3)  
EDAD 663 School Business Management (2)  
EDAD 664 School Finance (3)  
EDAD 665 School Law (3)  
EDAD 667 Seminar: Advanced Law (Prerequisites: EDAD 665)  
May be replaced by Special Ed Law  
EDAD 669 Selected Human Resource Topics (1)

EDAD 668 Human Resource Management (3)  
EDAD 699 Thesis (3-4\*)

#### Leadership Core

(Take one of the following courses, unless 3 were taken in the master's degree)

EDLD 651 Seminar: Ethics and Leadership (3)  
EDLD 652 Seminar: Leadership Studies (3)  
EDLD 653 Seminar: Women in Leadership (3)  
EDLD 647 Seminar: Organizational and Systems Change (3)

### SUPERINTENDENT

It is recommended that an initial license of K-12 Principal, Director of Special Education, or Director of Community Education is completed prior to seeking admission for a program as superintendent. Individual programs will be planned to assist in completing coursework, internship experience, and the final portfolio review. If one does not have any educational administrative license in the state of Minnesota, a 30 credit program will be planned. The Coordinator of Educational Administration should be contacted.

\*Plan with advisor

### EDUCATIONAL LEADERSHIP SPECIALIST (30 credits)

This is an advanced degree, which requires a master's degree for admission. This program does not lead to recommendation for administrative licensure.

#### Required Courses

EDLD 665 Legal Issues in Administration (3)  
EDLD 670 Portfolio Review (3)  
EDLD 671 Introduction to School Administration (3)  
EDLD 672 Policy and Administration (3)  
EDLD 673 Leadership of Special Programs (3)  
EDLD 674 Supervision and Administration (3)  
EDLD 679 Advanced School Administration and Finance (3)  
EDLD 682 Field Based Research (3)  
EDLD 684 Multicultural Leadership (3)  
EDLD 698 Internship in Administration (3)

#### Additional Optional Electives - not required by the program

EDLD 635 Second License Internship (3)  
EDLD 667 Seminar: Advanced Legal Issues in Administration (3)

#### Other Options

Students who are pursuing graduate work in more specialized fields such as higher education administration, general administration, and community education administration should consult with their advisor for designing their master's and/or specialist degree program.

### EXPERIENTIAL EDUCATION MS (34 credits)

The Master of Science degree program in Experiential Education at Minnesota State University, Mankato is the oldest graduate degree program in experiential education in the United States. Originally started in 1972 as a joint venture between Mankato State University (now Minnesota State University, Mankato) and the Minnesota Outward Bound School (now Outward Bound), the Master's program is now housed in the Department of Educational Leadership and has expanded its vision and developed an ever-increasing number of options for graduate students. Although there is a strong and still viable tradition of involvement in outdoor oriented activities, the department is committed to the idea that experiential education is much broader than wilderness programming.

The first fundamental assumption of the Master's program is that there is more to the knowing process than much of traditional education assumes. Graduate students in the program are encouraged, even required, to leave the classroom and develop meaningful learning experiences for themselves. Whether their interest is outdoor programming, classroom teaching, administration, psychological interventions or others, the program gives students academic credit for testing ideas. This program is designed for strongly self-directed individuals who want to experiment with new educational ideas.

The other fundamental assumption of the Master's degree program in Experiential Education is that raw, direct experience must be complemented with careful thought and reason. In this light, the core seminars are oriented toward the analysis and questioning about the fundamental theory of experiential education. In addition to core seminars, students can develop their reasoning abilities by taking graduate-level elective

courses of the students' own choosing. The goal of the program is to unite practical skills with scholarly abilities in the interests of the individual student. Graduate seminars include topics such as Philosophy and Theory of Experiential Education, Experience and Nature, Trends and Issues in Experiential Education, Experiential Education and School Reform, Controversial Issues in Experiential Education, Research Problems in Experiential Education, Leadership Studies, and Ethics and Leadership.

#### Recommended Leadership Core (9 credits)

Students choose three courses or seminars in the Department which will constitute the core requirement. Students are free to choose which courses or seminars they will take. Some courses which could serve as a core include, but are not limited to:

EXED	644	Philosophy of Experiential Education (3)
EXED	645	Experience and Nature
EXED	645	Experiential Learning and Educational Reform
EXED	645	Risk Management and Liability
EXED	645	Research Problems in Experimental Education
EXED	645	Trends and Issues in Experimental Education (3)
EXED	645	Controversial Issues in Experimental Education (3)
EXED	645	Teaching Methods of Experiential Learning
EDLD	647	Organizational & Systems Change (3)
EDLD	651	Ethics and Leadership (3)
EDLD	652	Leadership Studies (3)
EDLD	653	Women in Leadership (3)
EDAD	665	School Law (3)
EDAD	675	Organizational Development (3)
EDLD	692	Research in Educational Leadership (3)
EXED	695	Portfolio Development (1)

#### Recommended Experiential Education field-based or project-based courses within the Department (16 credits)

Choose any 500/600 level Experiential Education field-based courses selected in consultation with an advisor.

EXED	603	Experience and Education (project based)
EXED	604	Development of Experiential Education (project based)
EXED	634	Practicum
EXED	635	Internship
EXED	677	Individual Study
EXED	694	Alternate Plan Paper
EXED	695	Portfolio Development
EDLD	688	Project Demonstration
EDLD	699	Thesis

#### Electives (9 credits)

Choose 500/600 level Experiential Education, Educational Leadership, Educational Administration, or other electives selected in consultation with an advisor.

One course must be a graduate level research methods course, either within or outside the department.

#### DOCTOR OF EDUCATION (Ed.D.)—EDUCATIONAL LEADERSHIP

Offered by the Department of Educational Leadership, the Ed.D. in educational leadership addresses the professional development needs of educational practitioners who seek the doctorate in order to enhance their capacity to serve as leaders in (a) PK-12 public schools, (b) alternative educational organizations and charter schools, (c) nonprofit organizations, (d) higher education institutions, or (e) experiential education settings. The program addresses the need for advanced preparation of educational leaders and focuses on applied research in the field of education. Course content, practica, and field internships are built upon the professional standards for educational leadership and reflect emerging conceptions of leadership within educational organizations.

## COURSE DESCRIPTIONS

### EDUCATIONAL ADMINISTRATION

#### EDAD 561 (2) Interagency Coordination

The course addresses strategies for trust-building among community groups, mutual goal setting, and public relations.

#### EDAD 633 (3) School Administration

Skills and procedures for implementing site-based management, effective school leadership, and management.

#### EDAD 635 (1-6) Internship

Field based experience in administration of school programs.

#### EDAD 652 (3) Structure, Governance, & Trends

An overview of the organization and administration of education in the United States; analysis of federal, state, and local roles in school governance; investigation and integration of trends, concepts and models which impact the role of the school.

#### EDAD 654 (3) Theory & Practice in Supervision

This course examines functions of supervision, knowledge, interpersonal communications, and technical skills. Supervision models are presented and communications and human relations skills are emphasized.

#### EDAD 657 (3) Supervision of Special Programs

This course examines the administration of special programs and activities within education. Curricular and staffing needs are included.

#### EDAD 659 (3) Seminar: School Administration

Emphasis on leadership and management within the school setting. Advanced topics.

#### EDAD 663 (2) School Business Management

This course is designed to provide the student with knowledge of school accounting, budgeting, and other business administration functions. Prerequisite: EDAD 664

#### EDAD 664 (3) Public School Finance

This course is designed to provide information to help the student understand the relationship of the economy and education, several types of taxes, and several state and federal school aid schemes.

#### EDAD 665 (3) School Law

This course is the first of two courses designed to give students a comprehensive view of the law that governs the state school systems of America. Topics range across civil, criminal, and institutional law as they touch the student, teacher, and administrator.

#### EDAD 667 (3) Seminar: School Law

This course is the second of two courses designed to give students a comprehensive view of the law that governs the state school systems of America. Prerequisite: EDAD 665

#### EDAD 668 (2) Human Resource Management

This course includes a comprehensive study of all aspects of human resource management for direct application to employment. Topics will be delivered within a working model of educational organizations and will range from the initial planning of personnel positions through each stage of employment.

#### EDAD 669 (1) Selected Human Resource Topics

#### EDAD 670 (1-3) Situational Observation

The process by which candidates for licensure as school administrators document and present evidence of mastery of required competencies.

#### EDAD 674 (3) Fiscal Administration of Higher Education

This course examines various aspects of the fiscal administration of a college or university organization.

#### EDAD 675 (3) Organizational Development

Sources of grant funds, design of proposals, and regulations.

#### EDAD 676 (3) Administration Higher Education

This course will focus on funding, organization, governance, processes, and structures of higher education.

#### EDAD 682 (3) Seminar: Field Study Design

This course is designed for those students involved in writing theses. It is intended to aid students in the selection and development of the field study problem, the selection of the research design, and the development of the instruments to be used in the study for data gathering purposes.

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## EDUCATIONAL LEADERSHIP

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### EDAD 690 (1-6) Workshop

In workshops, the principal learning takes place through interchange among class members and the facilitator. Most work is completed during scheduled workshop hours. A workshop will have a specific focus on a particular problem and occurs in a compact time period.

### EDAD 692 (3) Research in Educational Leadership

This course will focus on techniques and methods for collecting and analyzing data and developing organizational surveys. The course will also focus on the writing of the alternate plan paper.

### EDAD 698 (3-9) Internship

Practical experience on the job for the principal and superintendency. Focused on the development of administrative competencies.

Prerequisite: 2/3 of degree

### EDAD 699 (3-6) Thesis

The thesis involves extended research resulting in a significant contribution to new knowledge. This reflects a student's ability to do individual, independent work of a creative and/or investigative type in an area of relation to the student's major field.

## EDUCATIONAL LEADERSHIP

### EDLD 634 (1-6) Practicum

Practical experience in Educational Leadership.

### EDLD 635 (3) Second License Internship

This course provides students who are pursuing a second administrative license with an experiential experience as a school administrator.

### EDLD 644 (1-3) Selected Topics in Experiential Education

This seminar provides an avenue for the exploration and investigation of special study topics in educational leadership.

### EDLD 647 (3) Seminar: Organizational & Systems Change

This seminar explores the dynamics of organizational and systems change in theory and practice.

### EDLD 650 (3) Colloquium in Leadership

Examines leadership roles in the educational organization, including the change process, organizational theory, reform, and the effects of change.

### EDLD 651 (3) Ethics in Leadership

Selected ethical/moral philosophies are studied using theoretical paradigms. Students become skilled at making ethical and moral decisions regarding every day dilemmas facing educational leaders.

### EDLD 652 (3) Leadership Studies

This course examines past and current research theory and philosophy relative to leadership development in both formal and informal educational settings.

### EDLD 653 (3) Women in Leadership

Surveys past and current research about women in leadership roles. The course will examine leadership through the lives of culturally diverse women who had both traditional and non-traditional roles.

### EDLD 665 (3) Legal Issues in Administration

This course examines legal issues in educational settings.

### EDLD 667 (3) Seminar: Advanced Legal Issues in Administration

In this course students apply advanced knowledge and skills around legal issues in the educational setting.

### EDLD 670 (3) Portfolio Review

The process by which candidates for school administration licensure document and present mastery level evidence of required competencies.

### EDLD 671 (3) Introduction to School Administration

This course provides an overview of leadership in the educational setting.

### EDLD 672 (3) Policy and Administration

This course examines how political influence and governance affect school policy.

### EDLD 673 (3) Leadership of Special Programs

This course develops skills in leading programs for students of special populations.

### EDLD 674 (3) Supervision and Administration

The course examines the role of the school leader within the function of supervision and evaluation.

### EDLD 677 (1-4) Individual Study

Individualized study in an area of leadership theory, research, or inquiry. Admission by prior application only.

### EDLD 679 (1-4) Advanced School Administration and Finance

In this course students apply advanced knowledge and skills in finance and leadership in the educational setting.

### EDLD 682 (3) Field Based Research

This course develops research skills in the educational setting.

### EDLD 684 (3) Multicultural Leadership

This course will examine to role of school leaders in a multicultural inclusive learning environment.

### EDLD 688 (1-3) Project Demonstration

This course will present a wide range of techniques and models for developing professional academic projects, including portfolios. Students will develop and demonstrate a professional project. This course may replace or be used in addition to an APP or thesis.

### EDLD 690 (1-4) Workshop

An experience where the principle learning takes place through interchange among class members and the facilitator.

### EDLD 694 (1-3) Alternate Plan Paper

The alternate plan paper includes a research requirement less extensive in nature than a thesis, but significantly greater in quality and quantity than the standard graduate term paper.

### EDLD 697 (3-6) Internship in Teaching

### EDLD 698 (3-6) Internship in Administration

This course provides students with an experiential experience as a school administrator.

### EDLD 699 (3-6) Thesis

The thesis involves extended research resulting in a significant contribution to new knowledge. This reflects a student's ability to do individual, independent work of a creative and/or investigative type in an area of relation to the student's major field.

### EDLD 734 (4) Professional Development Colloquium

This course will provide doctoral students with the knowledge and skills required to become a professor or instructor in higher education settings through topics including professional development plans (PDP), professional development reports (PDR), library research, portfolio development, conference presentations, developing lines of research, and writing for publication.

### EDLD 744 (4) Selected Topics

This seminar course provides an avenue for the exploration and investigation of special study topics in educational leadership.

### EDLD 747 (3) Organizational Theory and Analysis

The primary framework of this course is the main theoretical perspectives and issues of organizational decision-making, organizational innovation and organizational identity. Each theory/perspective will be examined with the following questions in mind: what is/are the overarching question(s) with which the theory is concerned? What is the central unit of analysis? What are the key concepts?

### EDLD 751 (3) Seminar: Advanced Leadership Ethics

Examination of ethics in leadership which includes student research on ethics in leadership and professional settings.

### EDLD 752 (3) Seminar: Leadership Exemplars

In depth study of exemplary leaders and research into their applicability to broader leadership contexts.

**EDLD 759 (3) Influences and Assessment of Public Policy**

This course is a required course for the doctorate in Educational Leadership. The seminar is offered so student can acquire the knowledge of how public policy is developed and the influences exerted on public policy.

**EDLD 767 (4) Advanced School Law**

This course is designed for doctoral students to conduct research in school districts to resolve problems that have legal implications. Completed research will be shared with the school districts as well as with fellow doctoral students.

**EDLD 782 (3) Design and Method in Qualitative Inquiry**

This course offers investigations into traditional and exploratory genres of qualitative research and provides the critical analysis tools necessary for doing so. Included will be aspects unique to qualitative design used for sampling, instrumentation, data collection and analysis, and report formats.

**EDLD 792(3) Quantitative Research Methods for Educational Leadership**

The course provides an overview of quantitative research methods, clarifies the role of quantitative methods in the research process, and provides experiences for application of quantitative methods.

**EDLD 793 (3) Focused Research Investigations 1**

This course offers focused investigations into a specific genre or methodology of research. Class members will work individually or in small learning groups in completing individually-constructed learning contracts to gain in-depth knowledge and skills in particular genre or methodology.

**EDLD 794 (3) Focused Research Investigations 2**

This course offers focused investigations into a specific genre or methodology of research different than those investigated in EDLD 793. Class members will work to complete an individually-constructed learning contract to gain in-depth knowledge an skills in research.

**EDLD 798 (4) Doctoral Internship in Educational Administration**

This course is designed for doctoral candidates in educational leadership to experience implementation of theory where they are given the opportunity to create, demonstrate, and maintain effective strategies and methodologies from leadership practices in a school or higher education setting.

**EDLD 799 (12) Dissertation**

The doctoral dissertation course is designed to guide the student through preparation and defense of the dissertation proposal, assist the student in the dissertation research and writing process and ensure focus and consistency in preparation and defense of the final product.

EXPERIENTIAL EDUCATION

**EXED 590 (1-3) Workshop**

**EXED 603 (3) Experience and Education**

An independent project-based course intended to immerse beginning graduate students into a 45-hour direct experience upon which they will complete a project and reflect on their own personal growth and learning.

**EXED 604 (3) Development of Experiential Education**

An independent project-based course whereby the student will design and/or facilitate an extensive learning experience for others. Designing and facilitating combined should total 45 hours.

**EXED 634 (1-6) Practicum**

A field experience that will further the learning of the student in Experiential Education. This course can be repeated in the degree plan of study.

**EXED 635 (1-4) Internship**

A field experience which typically entails working with a specific person or organization. This course can be repeated in the degree plan of study.

**EXED 644 (3) Seminar: Philosophy of Experiential Education**

This course examines the writings of historical and current thinkers who have made contributions to the field of experiential education. The philosophical underpinnings of Plato and Dewey, as well as more current experiential education literature will be discussed and examined.

**EXED 645 (1-3) Seminar: Selected Topics**

Courses that are routinely taught under Selected Topics include : Trends and Issues in Experiential Education, Experiential Education and School Reform, Research Problems in Experiential Education, and Controversial Issues in Experiential Education.

**EXED 677 (1-3) Individual Study**

A field-based course typically used for independent research or projects. This course can be repeated in the degree plan of study.

**EXED 694 (1-3) Alternate Plan Paper**

This course is used for students who did not complete their APP during their research class and for students who did or are planning to take their research course through another department, thereby completing the APP independently.

**EXED 695 (1) Portfolio Development**

This course serves as the primary assessment of a student's growth throughout their program.

**EDUCATIONAL STUDIES:  
ELEMENTARY AND EARLY CHILDHOOD MS  
EARLY CHILDHOOD SPECIAL EDUCATION M.ED.  
GRADUATE CERTIFICATE IN READING**

*College of Education  
Department of Elementary and Early Childhood  
328 Armstrong Hall • 507-389-1516*

Elementary and Early Childhood serves teachers, other professional educators and all persons concerned with quality education. Elementary and Early Childhood graduate courses, seminars and in-service programs deal with the teaching-learning process from pre-kindergarten through middle school. Graduate students can pursue advanced curriculum study, examining how curriculum is shaped, delivered, evaluated and changed to meet the needs of students and communities. Program emphasis is placed on helping graduate students strengthen and broaden the knowledge, skills and dispositions previously gained, helping them function even more effectively as educators.

**Admission.** In addition to meeting the general admission requirements of the College of Graduate Studies and Research, requirements for specific degree programs and for licensure endorsements are described in the sections which follow.

**EDUCATIONAL STUDIES: ELEMENTARY AND EARLY CHILDHOOD MS**  
(Thesis Plan - 30 credits)  
(Alternate Plan Paper - 34 credits)  
(Creative Project - 34 credits)

The Master of Science in Education Studies emphasizes curriculum planning and improvement of teaching skills. The program is available to all teachers who wish to broaden their base of knowledge, enhance their classroom performance and better serve the needs of their students. Students choose to specialize in a particular focal area. Either the thesis, alternate plan, or creative project may be followed.

For Admission, applications for the Master of Science program must have a valid Minnesota teaching license. They must have earned a bachelor's degree from an accredited college or university, and have a minimum grade point average of 2.75 for the last two undergraduate years. Applicants must also submit a letter stating why they are interested in admission to the program, as well as a recommendation form (available from the dept.) from a school administrator addressing professional competence.

- Required Tools of Research Core, All Options (9 Credits)**
- EEC 600 Introduction to Graduate Studies and Technology (3)
  - EEC 617 Elementary School Curriculum (3)
  - EEC 626 Preparing Students to Read (3)

- Major Research Core Courses: (9-15 credits)**
- EEC 604 Teacher as Researcher: Classroom Inquiry (3)
  - KSP 609 Research Methods or
  - SPED 600 Introduction to Education Research (3)

## EDUCATIONAL STUDIES: ELEMENTARY AND EARLY CHILDHOOD

EEC	610	Scholarly Writing (3)
EEC	694	Alternate Plan Paper (1-2)
EEC	695	Creative Project (1-2)
EEC	699	Thesis (3-6)

For students completing an Alternate Plan Paper or a Creative Project, EEC 610 Scholarly Writing is a recommended course.

Students completing a thesis must complete KSP 609 or SPED 600.

### Required 500/600 level Focal Courses in Education (Varies with each option, 9-15 credits)

500/600 level Elective Courses within the College of Education which will provide focus in a particular area of study (e.g., Early Childhood Education, Reading, and Elementary School).

### Focal Areas of Study (9-15 credits)

The courses listed under each area are meant to be suggestions only. Courses are to be selected in consultation with an advisor.

#### Early Childhood

EEC	565	Pre-Kindergarten Curriculum and Methods (2)
EEC	595	Internship: Early Childhood Family Education (2-4)
EEC	608	Teacher-Parent Relationships (3)
EEC	609	Education of Infants and Toddlers (3)
EEC	612	Language and Literacy Development (2)
EEC	614	Cognitive Development in Early Childhood Education (2)
EEC	640	Seminar: Early Childhood Education (2)
EEC	685	New Directions in Kindergarten (2)
SPED	520	Education of young Children with Exceptional Needs (3)

#### Reading

EEC	520	Reading Difficulties (3)
EEC	522	Emergent Literacy (2) <b>OR</b>
EEC	528	Teaching Reading And Writing in the Content Areas (3)
EEC	612	Language and Literacy Development (2)
EEC	619	Reading Assessment and Diagnosis (4)
EEC	620	Effective Reading for Content Areas (3)
EEC	626	Preparing Students to Read(3)
EEC	628	Writing for Teachers (2)
EEC	629	Providing Professional Development in Literacy (3)

#### Elementary School

EEC	520	Reading Difficulties (3)
EEC	528	Teaching Reading And Writing in the Content Areas (3)
EEC	601	Experimentation and Innovation in Elementary Classroom (2)
EEC	608	Teacher-Parent Relationships (3)
EEC	617	Elementary School Curriculum (3) <b>OR</b>
EEC	631	Seminar: Elementary Curriculum (2)
EEC	622	Trends in School Math (3)
EEC	628	Writing for Teachers (2)

Related Area Electives (Area varies with each option, 6 credits)

Choose 6 elective credits in a related academic area (outside of the College of Education), chosen in consultation with an advisor.

To satisfy degree requirements, students following a degree plan must successfully complete a written comprehensive examination. Students completing the thesis plan must also defend the thesis orally. A minimum of 50 percent of all coursework must be taken at the 600 level, excluding thesis or alternate plan paper credits.

### EARLY CHILDHOOD SPECIAL EDUCATION M.ED. PROGRAM (49 - 52 credits)

EEC	674	Etiology, Symptomatology of Disabilities and Intervention (3)
EEC	678	Supporting Gross and Fine Motor Development in Young Children with Special Needs (3)
EEC	679	Interdisciplinary Taming in Early Childhood Special Education (3)
EEC	681	Supporting Language, Literacy and Cognitive Development (3)
EEC	682	Appropriate Services for Culturally and Linguistically diverse Populations in ECSE (3)
EEC	683	Curriculum and methods for Young Children with Special needs in Group Settings (3)

EEC	684	ECSE Preschool Practicum (1)
EEC	687	Social/Emotional Development, Mental Health, and Positive behavior Support (3)
EEC	692	Infant Home Visiting Practicum (1)
EEC	693	Curriculum and methods for Home Visiting Infants and Toddlers with Special Needs (3)
EEC		Capstone Experience (1-3)
EEC	697	ECSE Student Teaching (3)
EEC	698	ECSE Student teaching Seminar (3)
NURS	580	Medically Fragile Infants and Young children (2)
CDIS	577	Augmentative and Alternative Communication (2)
SPED	600	Introduction to Educational Research (3)
SPED	661	Special Education Law (3)
KSP	609	Research Methods (3)

### GRADUATE CERTIFICATE IN READING (19 credits)

This program allows already licensed teachers to complete the requirements for the K-12 Reading Teacher License Endorsement.

EEC	625	Instructional Strategies and Remediation
EEC	626	Preparing Students to Read
EEC	619	Reading Assessment and Diagnosis
EEC	620	Effective Reading Instruction for the Content Areas
EEC	629	Providing Professional Development in Literacy
EEC	660	Practicum

#### COURSE DESCRIPTIONS

##### EEC 502 (3) Introduction to Teaching the LEP Student

For teachers of students whose dominant language is other than English.

##### EEC 504 (2) Curriculum: Applications of Technology in Education

To prepare pre-service and in-service teachers to use technology in the elementary classroom. Applications to each content area will be considered.

##### EEC 514 (2-4) Diagnosis and Corrective Instruction in Elementary Mathematics

Diagnostic teaching, evaluating deficiencies, skill analysis, use of case studies and tools of diagnosis.

##### EEC 517 (3) Teaching Reading to ESL Students

Foundation level knowledge concerning the reading process and how it pertains to the ESL student including strategy instruction.

##### EEC 518 (2) Elementary School Science Activities

Identification of appropriate science equipment, process skills, concepts and instructional attitudes for science in the elementary school.

##### EEC 520 (3) Reading Difficulties

Foundation level of knowledge concerning the characteristics, causes, diagnosis and treatment of reading difficulties.

##### EEC 522 (3) Emergent Literacy

Presents knowledge base and strategies for literacy development for infants-Kindergarten. Focus on Family Literacy.

##### EEC 528 (3) Teaching Reading and Writing in the Content Areas

Presents strategies for teaching and reading knowledge, attitudes and skills in the various teaching content areas.

##### EEC 564 (1) Early Childhood Final Project

Professional portfolio, self video, career options.

##### EEC 565 (2) Pre-Kindergarten Curriculum and Methods

Planning the curriculum for teaching prekindergarten children.

##### EEC 583 (2) Supervision of Student Teachers

To assist K-12 classroom teachers in developing their skills for supervising pre-service and student teachers.

**EEC 590 (1-3) Workshop**

The workshop format provides teachers and others opportunity to study a specific topic in a shortened, hands-on course. May be repeated.

**EEC 591 (1-4) In-Service**

Special courses designed to meet changing educational trends.

**EEC 595 (2-4) Internship: Early Childhood Family Education**

Principals and practices in Early Childhood/Family Education and programs. On-site experiences are required.  
Pre: FCS 485, 488; EEC 435

**EEC 600 (3) Introduction to Graduate Studies and Technology**

Introduction to the programs and requirements of graduate studies in education at Minnesota State University, scholarly writing and the classroom technologies necessary for the master teacher.

**EEC 601 (2) Experimentation and Innovation in the Elementary Classroom**

Examination of innovative instructional procedures for implementation, evaluation tools and techniques in K-8 settings.

**EEC 602 (1-4) Improvement of Instruction**

Planning, teaching, skills, instructional procedures, and evaluation with emphasis on classroom implementation.

**EEC 604 (3) Teacher as Researcher: Classroom Inquiry**

Teachers use observations and informal data to learn more about their own classrooms. Designed to provide learning experiences in using research techniques and procedures in actual field research.

**EEC 606 (1-4) Selected Topics**

Selected topics explored for elementary or secondary teaching. May be repeated.

**EEC 608 (3) Teacher-Parent Relationships**

Emphasis on parent-teacher-child relationships for effective learning of children through the elementary grades. Includes Early Childhood Family Education.

**EEC 609 (3) Education of Infants & Toddlers**

Develop mentally appropriate materials and methods for use with infants and toddlers in the home, in HEAD START, in family daycare and in center based day care.

**EEC 610 (3) Scholarly Writing**

Designed to provide learning experiences in utilizing techniques and procedures in actual field research situations.  
Pre: KSP 602 and EEC 604

**EEC 612 (2) Language and Literacy Development**

Relationship between speaking, listening, reading, and writing; role and techniques of assessment; language development in literacy and writing; effective literacy programs.

**EEC 614 (2) Cognitive Development in Early Childhood**

Examination of family development and systems, development of children, environmental needs, problem-solving and critical thinking.

**EEC 615 (2) Organize and Direct In-Service Reading Program**

To identify special areas of staff needs in literacy: theory and research, cooperation, implementing change.  
Pre: EEC 4/520

**EEC 617 (3) Elementary School Curriculum**

Historical foundations; influencing factors, issues, analysis of materials, projects in construction.

**EEC 618 (2) Preparation of Supplementary Reading Materials**

Relates basic reading instruction theory to materials used in the classroom and provides guidance in identifying and preparing needed supplementary materials.

**EEC 619 (4) Reading Assessment and Diagnosis**

Selection and use of materials and methods; practical application of techniques.

**EEC 620 (3) Effective Reading for Content Areas**

Provides strategies in reading for effective instruction in the various content areas.

**EEC 621 (3) Trends in Early Childhood**

**EEC 622 (3) Trends**

Recent research and current developments. Contemporary trends and teaching strategies in K-12.

**EEC 625 (3) Instructional Strategies and Remediation**

This course provides an in-depth study of instructional strategies and interventions/remediation strategies for readers at different levels. Effective reading strategies for groups and individual learners, data-based curriculum decisions, and selection of appropriate materials and instructional strategies will be emphasized.

**EEC 626 (3) Preparing Students to Read**

Emphasizes recent research, issues, teaching methods, and new materials in developmental reading and K-12 levels.

**EEC 628 (2) Writing for Teachers**

Readings of current issues and trends in methodologies, linguistics, grammar, composition and applications in K-12 settings.

**EEC 629 (3) Providing Professional Development in Literacy**

A study of the role of the reading supervisor in planning, implementing and evaluating the total reading program.

**EEC 631 (2) Seminar: Elementary Curriculum**

Critical study of problems and research related to elementary school curriculum.

**EEC 632 (2) Elementary School Supervision**

Theory of supervision; models, techniques, in-service, role of cooperating teaching; supervision components. Designed for supervision of student teachers and beginning teachers.

**EEC 636 (1-6) Clinical Experience in Curriculum Development**

Supervised practical experiences in curricular design and development. Admission by application only.

**EEC 640 (2) Seminar: Early Childhood Education**

Contemporary issues in early childhood education. May be repeated for a maximum of four semester hours of credit.

**EEC 642 (2) Organization and Administration of Early Childhood Programs**

Develops basic principles of organizing and administrating early childhood programs.

**EEC 643 (3) Advanced Assessment and Evaluation of Learning**

Intensive study and field practice in administering, scoring and interpreting various evaluative instruments with emphasis on mental aptitude assessment.

**EEC 645 (2) Seminar**

**EEC 647 (3) Effective Reading for Content Areas in the Middle School**

This course focuses on practical, best practice strategies to help learners be more successful with textbooks and other kinds of reading materials. Vocabulary, comprehension, and study strategies supported by research-based evidence will be presented along with successful strategies for implementation in a grade or school.

**EEC 650 (1-4) Technology Based Curriculum Materials**

To refresh and update skills and knowledge related to technology use in the elementary classroom.

**EEC 658 (2) Pre-Practicum Clinical Experience I**

Each student will learn about teaching and learning in a different educational setting, e.g., charter school, four period day. Middle School.

**EEC 660 (1-6) Practicum in the Elementary School**

Special teaching projects of an experiential and creative nature in the students' field of preparations.

**EEC 661 (2-4) Practicum**

Special teaching projects of an experiential or creative nature in the students' field of preparation.

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## EDUCATIONAL STUDIES: K-12 AND SECONDARY PROGRAMS

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### EEC 663 (3) Curriculum Development

Various theories for organizing curriculum are investigated and experiences are provided in designing an articulate program.

### EEC 670 (2) Advanced Seminar in Elementary Education

May be repeated for a maximum of six semester credits. To provide opportunity to study, analyze and synthesize research findings.

### EEC 673 (3) Documenting Student Progress in Reading with RTI for the Gen. Educ. Class

This course provides the information necessary for classroom teachers to document and monitor student progress in reading within the RTI framework. Content will include: which reading assessments to use and why; how to administer, score and interpret them; along with how to manage and make data-based decisions when designing monitored reading interventions within the general education classroom environment.

### EEC 674 (3) Etiology, Symptomatology of Disabilities and Intervention

Students will learn the etiology, characteristics, and classification of specific disabilities and medical conditions and their developmental and educational implications on infants, toddlers, and young children and their families.

### EEC 675 (2-4) Advanced Practicum in Elementary Education

Special projects of an experimental or innovative nature in elementary instruction, curriculum development or supervision.

### EEC 676 (2) Strategies for Individualized Instruction

Examine theory and designs for developing, implementing and evaluating various individualized instructional strategies.

### EEC 677 (1-4) Individual Study

Opportunity for individual study on curriculum or instruction topics under direction of graduate faculty.

### EEC 678 (3) Motor Development in Young Children with Special Needs

This course will present current best practice in the field of early childhood motor development and early intervention reflecting a combination of research of the fields and what academics and educators believe is appropriate to facilitating motor development for special needs children.

### EEC 679 (3) Interdisciplinary Teaming in ECSE

This course will cover the roles and responsibilities of teachers, paraprofessionals, families, other service providers such as Speech, Occupational, and Physical Therapists, and other agencies such as Public Health and Social Services in Early Childhood Special Education.

### EEC 680 (3) Formal Assessment of Young Children and Ongoing Progress

This course will teach the core skills that are necessary for early childhood special education teachers to be able to conduct developmental screenings, perform formal child observations, and administer criterion-referenced and standardized assessments.

### EEC 681 (3) Supporting Language, Literacy, and Cognitive Development

Students in this course will understand communication theory, typical and atypical language development (including bilingual development), and the role of language in learning and cognition.

### EEC 682 (3) Appropriate Services for Culturally and Linguistically Diverse Populations

Students will learn about bilingual language development and culture as it relates to ECSE assessment and intervention. There will be a focus on culturally sensitive practice and supporting native language development.

### EEC 683 (3) Curriculum and Methods for Young Children with Special Needs

This course will teach the core skills that are necessary for early childhood special education teachers to develop methods and curriculum to address the IEP goals and objectives of individual children either in self-contained or inclusive preschool settings.

### EEC 684 (1) ECSE Preschool Practicum

Students will be placed with an ECSE Preschool Teacher in a school district for three weeks and will develop and implement lessons in the setting in which they are placed.

### EEC 685 (2) New Directions in Kindergarten

Current research, instructional techniques and materials regarding kindergarten curriculum in language arts, reading, science, mathematics, social studies, psychomotor and creative arts.

Pre: EEC 370

### EEC 686 (1-4) Curriculum Design

Supervised practical experiences in curriculum design and development. Permission required.

Pre: consent

### EEC 687 (3) Social Emotional Development, Mental Health and Positive Behavior

Students will learn how to support families to nurture healthy social/emotional development in their children and they will learn how to create positive classroom environments that support pro-social behaviors and the expression of a full range of emotions.

### EEC 690 (1-3) Workshop

Graduate workshops covering a wide range of content.

### EEC 691 (1-4) In-Service

### EEC 692 (1) Infant Home Visiting Practicum

Students will be placed with an ECSE Home Visitor in a local school district for three weeks and will participate in home visit by implementing lessons with the children and their families.

### EEC 693 (3) Methods for Home Visiting Infants and Toddlers with Special Needs

Students will learn how to link assessment data to the development of an Individualized Family Service Plan (IFSP) and will learn how to structure home visits to address the objectives identified on the IFSP.

### EEC 694 (1-2) Alternate Plan Paper

For students completing a Master's degree with the alternate plan paper option.

### EEC 695 (1-2) Creative Projects

For students completing a Master's degree with the creative project option.

### EEC 697 (3) ECSE Student Teaching

Students will be placed with a cooperating ECSE Teacher in either a home-based or classroom-based setting. Students will be in a full time position for 16 weeks and will be expected to take the lead role in lesson planning and teaching during this time.

### EEC 698 (3) ECSE Student Teaching Seminar

This seminar course is designed to prepare student teachers for professional practice in the field of Early Childhood Special Education. Topics such as reflective practice, professional collaboration, job hunting, interviewing, developing a teaching portfolio, and reading relevant professional articles.

### EEC 699 (1-4) Thesis

For students completing the Master's or Specialist degree using the thesis option.

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## EDUCATIONAL STUDIES: K-12 AND SECONDARY PROGRAMS

*College of Education*

*Department of Educational Studies: K-12 and Secondary Programs*

313 Armstrong Hall • 507-389-1965

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The K-12 and Secondary Programs (KSP) department prepares graduate students for initial licensure as professional educators in 5-12 and K-12 classrooms, and in library media education. It serves practicing teachers and other professional educators seeking continued development through advanced programs in Curriculum and Instruction, Library Media Education, and Teaching and Learning. Program emphasis is placed upon facilitating graduate students in strengthening and broadening their knowledge, skills, and dispositions needed to function effectively as educators.

Graduate study is not merely a continuation of undergraduate work. It demands scholarship at a higher level of achievement; it places greater emphasis on research and creativity; and it requires much more initiative and responsibility.

There are four graduate program available:

**Graduate Teacher Licensure Program/ MAT**  
**Library media Education MS**  
**Educational Technology MS**  
**Teaching and Learning MS**

Education coursework is offered at the Minnesota State Mankato campus or the Minnesota State Mankato 7700 France Ave, Edina campus. However, even if you chose the Edina location, you might still have to take some course work in your content area (such as Mathematics, Music, etc.) at the Minnesota State Mankato campus. Please indicate the choice of location on your application form.

**Admissions.** Admission into the graduate teacher licensure program at Minnesota State Mankato occurs at three distinct levels:

- To the College of Graduate Studies and Research
- To the Program
- To Professional Education

### Application to Graduate Studies

Applicants should have submitted complete files a minimum of one month before the term of anticipated entry. Applications are accepted for any term or summer session, except for the Graduate Teacher Licensure Program which has one cohort per year, beginning in the fall semester. International students should complete their files and applications three months before the term of session of anticipated admittance. Students wishing to enroll in any KSP graduate or licensure program must be admitted to the College of Graduate Studies and Research and to the program. All applicants should submit the following to the College of Graduate Studies and Research:

1. A completed Application for Graduate Study;
2. Verification of the Baccalaureate degree from a regionally accredited college or university;
3. Two official transcripts listing undergraduate/graduate degree(s) to be sent directly from the degree granting institution to the College of Graduate Studies and Research (including Minnesota State Mankato students, undergraduates, faculty, and staff);
4. A minimum grade point average of 3.0 on a 4.0 scale in your undergraduate study. If the your GPA is below 3.0, you must have obtained a minimum GRE score of 500 on one or more portions (verbal, quantitative, or analytical) of the Graduate Record Exam;

**Note:** A candidate may request that the GRE be waived based on the following criteria: three references and 3.0 GPA based on last two years of undergraduate study or at least nine credits of graduate course work with a GPA of 3.0, or successful completion of a Masters degree from an accredited college or university.

5. Any additional information required for international students.

Where the GRE is required (see number 4 above), you must request that the testing institution send the official scores directly to the College of Graduate Studies and Research. Upon receipt of these materials, the College of Graduate Studies and Research will forward the applicant's file to the Department of Educational Studies: K-12 and Secondary Programs for admission recommendation.

### Application to the Programs

In addition to the College of Graduate Studies and Research requirements, the applicant must submit the following directly to the Department of Educational Studies: K-12 and Secondary Programs.

1. A completed application to the College of Graduate Studies and Research (see section above);
2. Three letter of recommendation forms (available online at <http://ed.mnsu.edu/ksp/gtl/forms/recommendation.pdf>) focusing upon the applicant's academic potential as well as the individual's promise to become an effective professional educator. Note, one of these recommendations must be from an undergraduate/graduate instructor or academic advisor, and it is highly recommended that one is from a current employer;
3. A completed Personal Statement form (available online at [http://ed.mnsu.edu/ksp/gtl/forms/personal\\_statement.pdf](http://ed.mnsu.edu/ksp/gtl/forms/personal_statement.pdf)) summarizing the applicant's experiences and professional goals;
4. The applicant's professional resume; and
5. A completed and signed plan of study (available online at <http://ed.mnsu.edu/ksp/gtl/forms/planofstudy.pdf>).

[edu/ksp/gtl/forms/planofstudy.pdf](http://ed.mnsu.edu/ksp/gtl/forms/planofstudy.pdf).) The plan of study must be signed by your advisor and the content specialist.

**Background Checks.** The amended Minnesota Data Practices Act (1997) requires that we inform all graduate teacher licensure candidates that a background investigation will be conducted as part of the graduate K-12 mentorship placement process. The background investigation is currently used and required in many school districts throughout Minnesota. The background check will be conducted during the first semester in the program.

Admission will occur for the Fall semester only. There will be no consideration of admission until all of the above admission criteria have been met. All material must be received in the Department of Educational Studies: K-12 and Secondary Programs to be considered for the Graduate Teacher Licensure Program. Early application is recommended, as enrollment is limited. Applicants will be notified regarding their admission status following the receipt of all required application materials.

The Program Application materials (the five items listed above) will be submitted to:

**Dr. Anne Dahlman**  
**Coordinator of Initial Licensure**  
**Educational Studies: K-12 and Secondary Programs**  
**313 Armstrong Hall,**  
**Mankato, MN 56001**

### Application to Professional Education

After meeting all program requirements and receiving acceptance into the GTL Program (either Graduate Certificate or Master of Teaching) candidates will need to apply for admittance into professional education. The process, material and requirements will be discussed and completed during the first orientation session (August 25, 2009). Prior to beginning the program, it is highly recommended that each candidate successfully complete the Praxis 1 Pre-professional Skills Test (PPST). The test score along with additional information will be needed prior to acceptance into professional education. ETS will no longer provide printed copies of the PPST (i.e., Tests at a Glance) booklets. They are available online at [www.ets.org/praxis](http://www.ets.org/praxis) under Test Preparation. For additional information about the PPST or professional education please visit: [/newweb/Advising/Praxis\\_PPST.html](http://newweb/Advising/Praxis_PPST.html)

**Time Requirements.** Throughout the program, candidates will be taking courses within the program, content courses, as well as completing field experiences. The time involved can and often is demanding. Participation in field experiences and student teaching require special sacrifices from the candidates, with student teaching being a full-time obligation. Often candidates must plan to take a leave of absence from their employment to participate in the field experiences and complete student teaching. Candidates receive no compensation for field experiences or student teaching and should make allowances for the loss of income.

### Licensure areas approved by the Board of Teaching include:

**5-12 Licensure.** Business Education (collaborative with Winona), Communication Arts and Literature, Family Consumer Science, Health Science, Mathematics, Science (Life Science, Chemistry, Earth and Space Science, Physics), Social Studies.

**K-12 Licensure.** Dance and Theatre Arts, English as a Second Language, Vocal Music and Instrumental Music, Physical Education, Visual Arts, World Languages and Cultures (Spanish, German, and French), Developmental Adapted Physical Education, Library Media Specialist.

Candidates entering either the Post-Baccalaureate or MAT program will be placed into a cohort of 15-25 candidates and work closely with a cohort of faculty. The program is a comprehensive standards-based licensure program, with course work offered either on weekends or Tuesday evenings. Courses are offered face to face and on-line with the use of Desire 2 Learn.

**Field Experiences.** Candidates are required to actively participate in K-12 field experiences throughout the Graduate Teacher Licensure Program. The field experiences are staggered throughout the program and require that each candidate spend time each semester in the K-12 setting during normal school hours (8:00 a.m. to 4:00 p.m., Monday - Friday). Candidates must plan to take a leave of absence from their employment to participate in field experiences. Candidates receive no compensation for the time spent in the K-12 classroom during their field experiences and should make allowances for the loss of income.

Field experiences provide opportunities for candidates to put theory into practice in a K-12 or 5-12 environment. During field experiences candidates will become

## EDUCATIONAL STUDIES: K-12 AND SECONDARY PROGRAMS

familiar with specific school-related issues, strategies to assist student learning and apply strategies to help students study and learn within the classroom environment. Prior to this experience candidates will need to complete a background check.

**Student Teaching.** All candidates must complete all content and program requirements as listed on their plan of study prior to student teaching. Student teaching demands special sacrifices from the candidates, with student teaching being a full-time obligation. Candidates must plan to take a leave of absence from their employment to participate complete student teaching. Candidates receive no compensation for the student teaching and should make allowances for the loss of income.

**Retention.** Admission does not guarantee continuation in the Graduate Teacher Licensure Program, admission into field experiences, student teaching, or graduation. As part of the admission process and throughout the program, the student's knowledge, skills, and disposition as well as professional potential are evaluated. Formalized reviews are conducted during field experiences and at each transition point.

Students must complete a minimum of 50% of all graduate credit at the 600 level, excluding thesis or APP credits and must maintain a grade point average of "B" or above in all coursework.

### GRADUATE TEACHER LICENSURE MASTER OF ARTS IN TEACHING

(Thesis Plan - 30 credits)

(Alternate Plan Paper - 34 credits)

(Project - 34 credits)

#### Required Coursework for Licensure (28 credits)

KSP 600	Media Utilization in Education (2)
KSP 602	Field Experiences: Foundation of Education (1)
KSP 603	Foundations of Education (3)
KSP 604	Teaching and Learning in the Inclusive Classroom (3)
KSP 605	Human Developing and Learning (3)
KSP 606	Reading and Writing in the Middle/Secondary School (1)
KSP 607	Philosophy and Practices of the Middle School (3)
KSP 602	Field Experiences: Middle/Secondary Level (1)
KSP 608	Planning, Instruction, and Evaluation in the Secondary School (3)
KSP 660	Practicum in the Middle School (4)
KSP 662	Practicum in the Secondary School (4)

**Note:** Students will be recommended for licensure when all requirements for licensure have been fulfilled. Upon successful completion of the coursework and student teaching, candidates must take and pass the Praxis II content and pedagogy examinations before applying and obtaining a Minnesota Teaching License.

#### Additional Coursework Required for Master of Arts in Teaching Resource Core (6 Credits)

##### Required

KSP 609	Research Methods (3) OR
KSP 611	Action Research to Improve Student Learning (3) AND
KSP 610	Scholarly Writing (3)

**Note:** All candidates are required to complete their capstone project (Thesis, Alternate Plan Paper, or Creative Project) prior to awarding the master's degree.

### STATE LICENSURE

Licensure does not occur automatically through graduation and the awarding of a diploma. The university recommends Minnesota licensure upon completion of all program and licensure requirements. Candidates must successfully complete the PPST examination of skills in reading, writing, and mathematics, as well as the Praxis II and Content examination. Minnesota state law requires that all students applying for initial licensure in this state be fingerprinted for national background checks. A conduct review statement will also need to be completed and signed. There is a fee for the criminal background check. The fee is for issuance of a State of Minnesota teaching license.

Students need to make application for a Minnesota teaching license at the close of the term in which they graduate. The College of Education, 118 Armstrong Hall, coordinates the licensure process.

### EDUCATIONAL TECHNOLOGY MS

Alternate Plan Paper - 34 credits

The Minnesota State University, Mankato Master of Science degree in Educational Technology responds to the growing needs of P-16 education and industry in providing instruction and training for the technological environment. Program emphasis may be educational technology integration into the classroom, instructional design for education, the technology leader, or instruction for distance learning.

The program consists of 34 graduate credit hour, including an alternate plan paper, 27 credits and a research portion. Courses are presented online through the university course management system.

**Each certificate consists of three 3-credit courses, and include:**

#### Educational Technology in the Classroom (9 Credits)

KSP 619	Technology Integration for the K-12 Teacher (3)
KSP 624	Integrating Multimedia into the K-12 Classroom (3)
KSP 629	Communicating Electronically to the Learning Community (3)

#### Distance Education Instructor (9 Credits)

KSP 664	Distance Learning (3)
KSP 680	Developing the Online Learning environment (3)
KSP 667	Media Utilization Tools (3)

#### Instructional Technology & Design (9 Credits)

KSP 643	Instruction Systems Development (3)
KSP 600	Media Utilization Tools (3)
KSP 689	Introduction to Technology (3)

#### The Technology Leader (9 Credits)

KSP 639	District Level Administration (3)
KSP 661	Networking (3)
KSP 673	Technology Funding (3)

**All students must complete additional research requirements:**

KSP 609	Research Methods (3)
KSP 610	Scholarly Writing (3)
KSP 694	Alternate Plan Paper (1)

### TEACHING AND LEARNING MS

(Thesis Plan - 34 credits)

(Alternate Plan Paper - 34 credits)

(Creative Project - 34 credits)

The Master of Science in Teaching and Learning (MSTL) emphasizes improvement of teaching skills and an increased understanding of learners. The program is available to all teachers who wish to broaden their knowledge base, enhance their classroom performance and better serve the needs of learners. It is standards based and includes many of the components necessary for preparation for National Board of Teachers Standards Certification.

**The MS in Teaching and Learning is designed around a variety of certificate options, including:**

- Learning Communities and Leadership
- Student Development and Learning
- Culturally Responsive Teaching
- Instructional Media in the Classroom
- Data Driven Decision Making to Improve Student Learning
- Improving Student Learning

This structure provides students with the flexibility to custom design a Masters degree of their choice, choosing from a combination of courses within certificates listed above. Students have the option of completing three certificate options and the research core, or completing two certificate options, the research core, or in consultation with their advisor, selecting nine courses (27 credits) from any of the course options or any 3 courses from their teaching field.

#### Admission Requirements

To be considered, the applicant must complete the following:

1. A completed Application for Graduate Study;
2. Verification of the Baccalaureate degree from a regionally accredited college or university;

3. Two official transcripts listing undergraduate/graduate degree(s) to be sent directly from the degree granting institution to the College of Graduate Studies and Research (including Minnesota State Mankato students, undergraduates, faculty, and staff); and
4. Attainment of a minimum grade point average of 3.0 on a 4.0 scale in undergraduate study. If the applicant's GPA is below 3.0, the student must have obtained a minimum GRE score of 500 on one or more portions (verbal, quantitative, or analytical) of the Graduate Record Exam.
5. Two letters of recommendation. Recommendation forms may be obtained from the Department of Educational Studies: K-12 and Secondary Programs Web site.
6. Any additional information required for international students, if appropriate.

Students wishing to enroll in any KSP graduate or Library Media Education program must be admitted to the College of Graduate Studies and Research and to the program. All applicants should submit the following to the College of Graduate Studies and Research:

1. A completed Application for Graduate Study;
2. Verification of the Baccalaureate degree from a regionally accredited college or university;
3. Two official transcripts listing undergraduate/graduate degree(s) to be sent directly from the degree granting institution to the College of Graduate Studies and Research (including Minnesota State Mankato students, undergraduates, faculty, and staff); and
4. Any additional information required for international students, if appropriate;
5. Attainment of a minimum grade point average of 3.0 on a 4.0 scale in your undergraduate study. If the applicant's GPA is below 3.0, the student must have obtained a minimum GRE score of 500 on one or more portions (verbal, quantitative, or analytical) of the Graduate Record Exam.

**MSTL Certificate Options**

**Learning Communities and Leadership (9 credits)**

- KSP 641 Classroom Learning Communities (3)
- KSP 657 The Professional Learning Community (3)
- KSP 665 Teacher as Leader (3)

**Student Development and Learning (9 Credits)**

- KSP 652 Advances in Student Development and Learning (3)
- KSP 659 Character Development and Moral/Ethical Reasoning (3)
- KSP 672 Spirituality and Learner Development in Education (3)

**Culturally Responsive Teaching (9 Credits)**

- KSP 601 Education for a Multicultural Society (3)
- KSP 638 Literacy and Bilingualism (3)
- KSP 644 School, Family and Community Partnerships (3)

**Instructional Media in the Classroom (9 Credits)**

- KSP 619 Technology Integration for the K-12 Teacher (3)
- KSP 624 Integrating Multimedia into the K-12 Classroom (3)
- KSP 629 Communicating Electronically to the Learning Community (3)

**Data Driven Decision Making To Improve Student Learning (9 Credits)**

- KSP 611 Action Research to Improve Student Learning (3)
- KSP 640 Data and Assessments (3)
- KSP 675 Using Data to Improve Student Learning (3)

**Improving Student Learning (9 Credits)**

- KSP 612 Differentiated Instruction (3)
- KSP 613 Managing and Monitoring Student Learning (3)
- KSP 663 Curriculum Management (3)

**Research Core (4 Credits)**

**Required**

- KSP 609 Research Methods (3) OR
- KSP 611 Action Research to Improve Student Learning (3)

**Electives**

- KSP 610 Scholarly Writing (3) OR
- KSP 694 Alternate Plan Paper (1-2) OR
- KSP 695 Creative Project (1-2) OR
- KSP 699 Thesis (3-6)
- KSP 615 Intro to Scholarly Work (1)

**Additional Requirements**

In addition students must successfully complete a written comprehensive examination during the semester (or prior to) of graduation; and take a minimum of 50 percent of all coursework at the 600 level. To satisfy degree requirements all students must complete a capstone experience. After consulting with their advisor, students may choose a capstone experience of thesis, alternate plan paper, or creative project.

**LIBRARY MEDIA EDUCATION MS**

(Thesis Plan - 30 credits)  
 (Alternate Plan Paper - 34 credits)  
 (Creative Project - 34 credits)

**Admission Requirements.** Applicants file should be completed a minimum of one month before the term of anticipated entry. Applications are accepted for any term or summer session. International students should complete their files and applications three months before the term of session of anticipated admittance.

Library Media Education is offered for those who have a current Minnesota teaching license. Candidates entering this program have two options: a certificate in Library Media Education or a certificate with a master's degree in Library Media Education (MS). The Library Media Education program is accredited by NCATE and the Minnesota Board of Teaching according to standards developed by AASL and AECT.

Candidates entering the Library Media Education program will be placed into a cohort of 15-25 candidates and work closely with a cohort of faculty. The program is a comprehensive standards-based licensure program, with course work offered either on weekends or Monday evenings. Courses are offered face to face and on-line with the use of Desire 2 Learn.

**Note:** Although the state of Minnesota does not require a graduate degree in media for licensure as a school library media specialist, many states do require master's degree. Additionally, Information Power, the national guidelines for school library media programs, recommends that the master's degree be considered the entry level degree for professionals in school library media centers. The K-12 and Secondary Programs department also believes that a master's degree with a strong undergraduate general education background provides the best preparation for school library media professionals.

**Required Coursework for Licensure (28 credits)**

- KSP 617 Foundations of Information Centers in Society (3)
- KSP 631 Organization, Management, Leadership, and Administration of Media Centers (3)
- KSP 628 Instructional Design and Production for Digital Learning (3)
- KSP 635 Information Literacy Skills and the Curriculum (3)
- KSP 634 Instructional Design and Production of Resources (3)
- KSP 622 Materials for Children (3)
- KSP 630 Materials for Young Adults (3)
- KSP 621 Information Resources (3)
- KSP 698 Internship (4)

**Note:** Students will be recommended for licensure when all requirements for licensure have been fulfilled. Upon successful completion of the coursework and the internship, candidates must take and pass the Praxis II content examination before applying and obtaining a Minnesota Library Media License.

**Additional Coursework Required for Masters in Library Media Education (MS)**

- KSP 609 Research Methods (3)
- KSP 610 Scholarly Writing (3)

**Note:** All candidates are required to complete their capstone project (Thesis, Alternate Plan Paper, or Creative Project) prior to awarding the master's degree.

**Retention.** Admission does not guarantee continuation in the Library Media Education program, admission into the internship, or graduation. As part of the admission process and throughout the program, the student's knowledge, skills, and dispositions as well as professional potential are evaluated. Formalized reviews are conducted during internship and at each transition point.

Students must complete a minimum of 50% of all graduate credit at the 600 level, excluding thesis or APP credits; and must maintain a grade point average of "B" or above in all coursework. Satisfactory completion of a comprehensive examination during the semester (or prior to) of graduation is required. Students must enroll in KSP 685 Written Comprehensive Examination.

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## EDUCATIONAL STUDIES: K-12 AND SECONDARY PROGRAMS

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College of Education  
Gail Orcutt, Licensure Coordinator  
118 Armstrong Hall  
507-389-1216

The university recommends licensure to a state upon student's completion of a licensure program. Licensure does not occur automatically through graduation and the awarding of a diploma. Students need to make application for a Minnesota Library Media license at the close of the term in which they graduate. The College Education, 118 Armstrong Hall, coordinates the licensure process. In addition to meeting all program requirements, the Praxis II content examination must be taken and passed. Minnesota state law requires that all students applying for initial licensure in this state be fingerprinted for national background checks. A conduct review statement will also need to be completed and signed. There is a fee for the criminal background check. The fee is for issuance of a State of Minnesota licensure.

The contact person is Dr. Linda Underwood (507-389-5708 or 389-1965) or e-mail: linda.underwood@mnsu.edu.

### CURRICULUM AND INSTRUCTION SP (30 credits)

The Specialist Degree in Curriculum and Instruction is available for professionals who are seeking an advanced level of preparation as curriculum directors, or department chairs managing the human and curriculum materials within a school or department. Within the Specialist program a student obtains an in-depth knowledge in a specific area; i.e., research, curriculum development and/or appraisal. The contact person is Dr. Debra Anderson (507-389-5710 or 389-1965) or e-mail: debra.anderson@mnsu.edu

#### Additional Requirements

See the Graduate Studies Bulletin or the Graduate Studies and Research web site for additional information.

#### Program Research Core (6 credits)

KSP 579 Grant Writing and Program Funding (3)  
KSP 681 Quantitative Research Methods (3) **OR**  
KSP 682 Qualitative Research Methods (3)  
KSP 699 Thesis (3)

#### Required C & I Course (8 credits)

Choose 8 credits of 500/600 level KSP courses chosen in consultation with an advisor.

#### Required Practicum Course (3 credits)

KSP 636 Clinical Experience in Curriculum Development (1-6)

#### Related Area Electives (8 credits)

8 elective credits in a related academic area, chosen in consultation with an advisor.

#### Electives (5 credits)

Choose any 500/600 level elective courses in consultation with an advisor.

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## COURSE DESCRIPTIONS

### KSP 504 (2) Curriculum Applications of Technology in Education

### KSP 507 (1-2) Human Relations: Minnesota Based Native American Licensure Requirement

Teachers new to Minnesota must show evidence of Human relations competencies and the ability to adapt curriculum, instruction and teaching practices for diverse learners. Currently we offer a 3 credit course for licensure. However, many teachers are only missing a standard on Minnesota Based Native Americans. We usually do an independent study with these people. This new course would improve the delivery of the standards.

### KSP 508 (3) Teaching to the K-12 ELL Student

For teachers of students whose dominant language is other than English.

### KSP 515 (2) Materials for Younger Children

Examination of print and audiovisual media for younger children birth to age seven. Identification of selection sources to identify materials. Evaluation of re-

sources and practice in using them. Use of electronic search engines to identify resources, including, but not limited to, research collections, discussion groups, and electronic periodicals.

### KSP 525 (2) Reading and Writing in the Secondary School

Concepts, objectives, procedures, and reading in subject matter field.  
Prerequisite: KSP 310

### KSP 550 (3) Human Relations in a Multicultural Society

Study of interpersonal communication skills, self-esteem, classroom relationships, and cultural diversity applied to educational settings. This course meets the state of Minnesota human relations requirements for teacher licensure.

### KSP 551 (1-3) Cultural Diversity Internship

Opportunity for "hands-on" learning experience working with students of culturally diverse backgrounds, one-to-one, small group, tutoring, activities supervision and lesson planning, and implementation.  
Prerequisite: KSP 220 or KSP 4/550

### KSP 561 (3) Service Learning: Theory and Practice

A focus on service-learning: planning, implementation, evaluation, and celebration of service-learning as program, activity, class, and integration into academic study.

### KSP 565 (3) Filmmaking

Students will produce a short digital film incorporating the five phases and ten planning stages of filmmaking. The role independent film plays in a culturally diverse society will be illustrated and discussed. Examples of each genre will be examined.

### KSP 579 (3) Grant Writing and Program Funding

Procedures for designing research, writing proposals and requests for grants, contracts and funding from external sources; grant administration.

### KSP 580 (1-3) Seminar

In depth study and narrow focus on an educational topic. Students do extended research outside of class and defend their research in class.

### KSP 583 (2) Supervision of Student Teaching

To assist K-12 classroom teachers in developing their skills for supervising pre-service and student teachers.

### KSP 589 (1-3) Selected Topics

Specific focus on an educational topic that may be taught as a regular course such as: Topic: Web Resources for the Classroom (usually a group requests a specific topic).

### KSP 590 (1-6) Workshop

Specific focus on an educational topic that is conducted for a special group. May be repeated.

### KSP 591 (1-4) In-Service

Special courses designed to meet changing educational trends.

### KSP 600 (2) Media Utilization in Education

In this course, current instructional media used in the secondary classroom is demonstrated and used by the students. Electronic media, computer aided instruction, telecommunications, and standard classroom media applications are stressed. Ethical issues of copyright discussed.

### KSP 601 (3) Education for a Multicultural Society

This course uses experiential, intercultural activities to examine how their own world view impacts the curricular choices they make while teaching. They will develop a plan to integrate a multicultural world view into their current curriculum.

### KSP 602 (1) Field Experiences

Candidates are required to take this course twice throughout their teacher licensure program. During field experiences candidates will become familiar with: the communication process about specific school-related issues, restorative measures, strategies to help students comprehend class material, and strategies to help students study and learn within the classroom environment.

**KSP 603 (3) Foundations of Education**

Study and application of developing positive relationships in diverse learning communities with social, historical, and philosophical perspectives. Bases on the premise that building a learning community and developing positive relationships with colleagues and learners is basic to teaching and learning.

**KSP 604 (3) Teaching and Learning in the Inclusive Classroom**

Theories of human development with a concentrated study of cognitive development, applied to learning in the multicultural and inclusive classroom.

**KSP 605 (3) Human Developing and Learning**

This course is intended to prepare future educators and enhance the knowledge of present educators and counselors. The focus of this course is to provide foundational knowledge on physical, emotional, social, and cognitive development enhancing learning development of youth in grades 5-12.

**KSP 606 (1) Reading and Writing in the Middle/Secondary School**

Reading as it applies to Middle and Secondary schools will be the focus of this course. The course will focus on the current issues and trends in methodologies, linguistics, grammar, composition and applications of reading throughout the course.

**KSP 607 (3) Philosophy and Practices in the Middle School**

This course is designed to provide inexperienced and experienced educators with greater insight into the unique position of the middle school in the U.S. system of public education. Throughout the course students will explore topics of concern regarding middle school education.

**KSP 608 (3) Planning, Instruction, and Evaluation in the Secondary School**

This course is designed to guide K-12 and 5-12 student through the design and implementation of a standards-based curriculum form the analysis of standards, designing performance packages base upon the standard, designing a course, and pedagogical methods.

**KSP 609 (3) Research Methods**

The research process is one that is complicated, and nonlinear, and very often difficult for students to understand and see its strengths and weaknesses. This course will introduce students to research methodologies as applied to research and evaluation. The course will focus on developing skills and applying different methodologies in a research plan.

**KSP 610 (3) Scholarly Writing**

Designed to provide a learning experience in utilizing techniques and procedures in scholarly writing.

**KSP 611 (3) Action Research to Improve Student Learning**

Classroom teachers will learn how to conduct research in their classrooms that is designed to improve student learning.

**KSP 612 (3) Differentiated Instruction**

Improving student achievement through differentiated curriculum and instruction; learning about and applying best practices; teaching for understanding, critical thinking, problem solving and decision-making; and accommodating teaching and learning styles.

**KSP 613 (3) Managing and Monitoring Student Learning**

What every classroom teacher should know about management strategies, discipline models, successful classroom environments, planning that facilitates positive behavior, dealing with difficult students, as well as formats for focusing observation, peer observation and collecting data.

**KSP 614 (3) Introduction to Curriculum: Theory and Leadership**

An examination of the role of leader, theories of leadership and their applications in school improvement.

**KSP 615 (1-4) Selected Topics**

Selected topics explored for secondary teaching. May be repeated.

**KSP 616 (2) Multi-Ethnic Curriculum Materials and Resources**

Provides teachers with information needed to develop curriculum and instruction materials, locate resources and enhance awareness of the multi ethnic heritage of this nation.

**KSP 617 (3) Foundations of Information Centers in Society**

In this course students will study the current information environment and explore the challenges that the profession of library and information services faces. Participates will identify and discuss issues and topics surrounding and transforming the social, cultural, economic and educational role of the library and become knowledgeable about the issues such as service, technology, intellectual freedom, and professional practices.

**KSP 619 (3) Technology Integration for the K-12 Teacher**

This course includes in-depth modules which present various types of application for the classroom. Current software applications and hybrids will be explored to determine the strengths and weaknesses of each. This course establishes both theoretical and practical application and integration of technology into the classroom.

**KSP 620 (1-3) Trends in:**

The trends format provides teachers and others opportunity to study recent research and current developments with an interdisciplinary nature to include a variety of topics. This course may be in a shortened hands-on format. May be repeated.

**KSP 621 (3) Information Resources**

This course will examine, acquire, evaluate and use reference media sources to meet the information needs of a media center's clientele. Participants will examine and review bibliographic resources and their relationship to instruction and instructional in-service. Emphasis will be placed on reading, discussing, selecting, and evaluating resources in the context of curricular issues, cooperative endeavors with other libraries and trends in the information and reference services field.

**KSP 622 (3) Materials for Children**

Students will learn and practice selecting, evaluating, and using print, audiovisual and electronic media for children in grades K-6. Participants will learn to identify and discuss a variety of genres; using reviewing sources and selection tools; identify major children's book awards; research authors and books; become knowledgeable about current issues such as censorship; locate and prepare a multiple format mediaography of children's materials and demonstrate curricular uses of this media.

**KSP 623 (2) Photography**

Introduction to photography. Choice of film-prints and slides. Color film exposure-meters. Color filtration-filters and mounts. Commercial sources. Darkroom equipment and facilities. Utilization of K-12 classroom. Slide duplication. Computer graphics/Quick take photography. Field trips-making the most of yearbook and other PR formats. Future trends.

**KSP 624 (3) Integrating Multimedia into the K-12 Classroom**

This course includes in-depth modules that are involved in multimedia. Participants will have the opportunity to use current software and explore how to integrate multimedia into the K-12 classroom setting. This course establishes both theoretical and best practices of the uses of multimedia.

**KSP 625 (3) Philosophy of Education in Historical Context**

Explores how belief systems, expressed in philosophical schools of thought, have shaped the development of the U.S. public school form the Colonial Period to the present.

**KSP 626 (2) Advanced Reference Materials**

Specialized sources in the sciences, arts, and humanities. Patron interviewing techniques.  
Pre: KSP 621

**KSP 627 (2) Advanced Materials for Children**

In-depth examination of authors of a particular genre. Examination of the Caldecott award winning titles. Children's magazines. Examination of award winning titles form other countries. Electronic resources: netscape and microcomputer software.  
Pre: KSP (KSP 417/622)

**KSP 628 (3) Instructional Design and Production for Digital Learning**

Teaching and learning over distance education systems with the main emphasis on distance education across the internet. The history of distance education will be discussed. Proper instructional design techniques when developing of coursework will be examined. Proper selection of content will be stressed.

**KSP 629 (3) Communicating Electronically to the Learning Community**

This course explores how current electronic applications and multiple approaches that can be used to develop and support communication with parents, students, and the community.

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## EDUCATIONAL STUDIES: K-12 AND SECONDARY PROGRAMS

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### **KSP 630 (3) Materials for Young Adults**

This course covers developmentally appropriate library and information services for young adults, ages 15-18 with an emphasis on literature and the uses of literature in schools and libraries. The course includes material on non-book services, programming, and other services specific to this age group.

### **KSP 631 (3) Organization, Management, Leadership and Administration of Media Centers**

In this course the management function and role of the media specialist in the school will be explored. The components of effective school library media programs: resources, personal, spaces, budget, planning, organizing and policy development are studied.

### **KSP 632 (3) Educational Issues in Global Context**

Examines systems of education, both Western and non-Western, as they are shaped by social, cultural and political issues; focuses on understanding the United States system more completely by viewing it through a "global" lens.

### **KSP 634 (3) Instructional Design and Production of Resources**

The course explores the design and production of instructional media for the classroom and for professional presentations. The student will explore the utilization of computers in an instructional setting with presentations of student designed resources. It will include the creation of an electronic portfolio.

### **KSP 635 (3) Information Literacy Skills and the Curriculum**

The course will examine the role of the school library media specialist in the curriculum processes and explore the role of the media specialist in resource-based teaching. The roles of the school library media specialist as teacher, instructional partner, information specialist, and program administrator will be major topics.

### **KSP 636 (1-6) Clinical Experience in Curriculum Development**

Supervised practical experiences in curricular design and development. Admission by application only.

### **KSP 637 (2) Materials: Advanced Young Adult Literature**

Examination of trends in recent young adult fiction. Selection, evaluation and use of young adult fiction. Reading and discussion of current young adult fiction.

### **KSP 638 (3) Literacy and Bilingualism**

This course will examine the interaction between first and second language literacy. Students will learn strategies for helping ELL students improve reading skills and develop content area literacy.

### **KSP 639 (3) District Level Administration**

Philosophy of district media and technology services, relationships with school personnel, goal setting and budget planning.

### **KSP 640 (3) Data and Assessments**

This course examines assessment at the district, school, and classroom level. The alignment of classroom assessments with state mandated and other standardized assessments will be addressed. This course will also examine the connection between assessment and instruction.

### **KSP 641 (3) Classroom Learning Communities**

Examination of the development and maintenance of classroom learning communities. The class focuses on related, effective instructional and assessment approaches, and student-teacher and student-student relationships.

### **KSP 643 (2) Instructional Systems Development**

Instructional systems approach to the development of coursework will be examined. Proper selection of content will be stressed. Selecting, evaluating, and/or production of course materials will be emphasized. Proper testing procedures will be stressed. Formative and summative evaluations will be done.

### **KSP 644 (3) School, Family and Community Partnerships**

Students will become familiar with the culture and norms of recent immigrant populations through interactions with community members. Cross cultural communication, storytelling, and ethnographic interviews will be used to create awareness and analyze cross-cultural incidents.

### **KSP 645 (1-2) Seminar:**

Critical study of current research, issues, and teaching strategies related to secondary education in a shortened period of time. May be repeated.

### **KSP 646 (3) The Middle School**

This course is designed to provide inexperienced and experienced educators with greater insight into the unique position of the middle school in the U.S. system of public education. Throughout the course students will explore topics of concern regarding middle school education.

### **KSP 648 (3) Field Experiences in the Middle School**

This 100 hour field experiences will provide opportunities for practicing teachers with a current MN Teaching license to put theory into practice in a 5-8 environment. During field experiences candidates will become familiar with specific school-related issues, strategies to assist students in learning and apply strategies to help students study and learn within the classroom environment. Prior to this experience candidates may need to complete a background check.

### **KSP 649 (1-3) Environmental Education Program**

Research, compare, contrast environmental education programs.

### **KSP 650 (1-4) Curriculum Materials in:**

Examines state and national education programs and materials with an opportunity to develop materials for classroom use. May be repeated.

### **KSP 651 (3) Understanding NBPTS Certification**

Focuses on knowledge of the overall certification process of the National Board of Professional Teaching Standards and includes attention to the Five Core Propositions; the describe, analyze and reflect process; and the requirements of the individual content-area certificates.

### **KSP 652 (3) Advances in Student Development and Learning**

This course focuses on study of current advancements in understanding how students learn and develop, including brain-based research, revisions to existing theories, and research studies.

### **KSP 653 (3) Writing for NBPTS Certification**

Focuses on the intensive videotaping and writing processes required for Entries One, Two, Three and Four of the NBPTS Portfolio, including peer and facilitator review of draft tapes and writings.

### **KSP 654 (3) Secondary School Curriculum**

A look at evolving nature of the secondary school curriculum and the factors influencing development.

### **KSP 655 (3) NBPTS Portfolio Submission and Assessment**

Course focuses on finalization of the intensive videotaping and writing processes and formal submission of the NBPTS Portfolio. It also includes preparation for the NBPTS examination in the various content-area certificates.

### **KSP 656 (2) Multicultural Materials**

To identify books and other media with multicultural themes and topics for young adults.

### **KSP 657 (3) The Professional Learning Community**

This course addresses NBPTS Standard 5.1 through attention to knowledge and application of: characteristics of effective learning communities, team skills for collaboration, completion of a collaborative school-based project.

### **KSP 658 (2) Pre-Practicum Clinical Experiences I**

Each student will learn about teaching and learning in a different educational setting, e.g., charter school, for period day, Middle School.

### **KSP 659 (3) Character Development and Moral/Ethical Reasoning**

This course focuses on theories and classroom applications related to character development and ethical and moral reasoning.

### **KSP 660 (1-6) Practicum in the Middle School**

Special teaching projects of an experimental or creative nature in the students' field of preparation.

### **KSP 661 (3) Networking**

This course covers basic networking and infrastructure for a school, district or organization. The course is developed for the technology leader to understand the basic structure of technology networking to make informed decisions regarding the school and/or organization technology.

**KSP 662 (1-6) Practicum in the Secondary School**

Special teaching projects of an experimental or creative nature in the students' field of preparation

**KSP 663 (3) Curriculum Management**

Various theories for organizing and managing curriculum; aligning standards with outcomes, curriculum, instruction, and assessment; deep curriculum alignment; theories of leadership and their applications in school improvement; applications and criteria for assisting teachers' competence and growth.

**KSP 664 (3) Distance Learning**

This course covers basic history, theory, and purpose of distance learning. It will include exposure to the various and most recent online management programs.

**KSP 665 (3) Teacher as Leader**

This course focuses on the examination of the role of teacher as leader, including theories of leadership and their application, leading change processes and professional learning communities.

**KSP 666 (3) Interdisciplinary Curriculum**

Rationale and models for developing cross-disciplinary curriculum (i.e., curriculum mapping, parallel teaching) and learning experiences will be explored.

**KSP 667 (3) Media Utilization for Instructional Technology**

Current instructional media used in the secondary classroom is demonstrated and used by students. Electronic media, computer aided instruction, telecommunications, and standard classroom media applications are stressed. Ethical issues of copyright are discussed.

**KSP 668 (3) School Leadership: Social, Philosophic & Ethical Action**

Focus on the social nature of human life and interaction as a basis for learning and for leading organizations such as schools. Students will complete a written educational philosophy for carrying out responsibilities in schools.

**KSP 670 (3) Collegiate Institutions in the United States**

An examination and review of history, foundations, current developments, and future role of two-year and four-year collegiate institutions in the United States and how they function to meet evolving needs.

**KSP 671 (3) Learning and Teaching in Higher Education**

Exploration and application of adult learning theory and research, including focus on development of critical and reflective thinking. Study of instructional strategies fostering active student engagement in classrooms.

**KSP 672 (3) Spirituality and Learner Development in Education**

This course focuses on broad-based definitions of spirituality and how responding to the innate needs for meaning and connectedness can support learning and learner development.

**KSP 673 (3) Technology Funding**

The focus is on researching and applying for grants for technology programs within schools and/or non-profit organizations. They will learn what programs are available, eligibility, and grant possibilities within the scope of technology guidelines for No Child Left Behind.

**KSP 675 (3) Using Data to Improve Student Learning**

This course is designed to promote a faculty culture of collaboration, inquiry, and student achievement through data driven decision making. Methods of data collection and analysis will be examined and placed in the context of a school improvement program.

**KSP 676 (4) Adult Development and Learning**

This course will introduce students to the major theories and research related to adult development and learning. The content covered links classic and current literature in the fields of developmental and educational psychology as it applies to adult students in post-secondary and career settings. Course activities and assignments are designed to promote student understanding regarding adult developmental change from an ecological systems perspective.

**KSP 677 (1-6) Individual Study**

Opportunity for individual study on areas germane to the broader disciplines in education under direction of graduate faculty.

**KSP 678 (4) Curriculum Design, Assessment and Evaluation**

This course is designed to help develop a basic understanding of curriculum design, development, and management. We will explore how to create curricula that cover the facts while engaging students in more critical types of understanding. Additionally, we will explore options in curriculum development and design.

**KSP 680 (3) Developing the Online Learning Environment**

This course explores the development of the online learning environment, to include the exploration of new technologies and software, creating the environment to develop learning communities, and exploring and developing assessment tools for the online course.

**KSP 681 (3) Quantitative Research Methods**

This course will introduce students to quantitative research as applied to educational research and evaluation. The course will focus on developing skills and applying quantitative methodology in a research plan.

**KSP 682 (3) Qualitative Research Methods**

This course will introduce students to qualitative research as applied to educational research and evaluation. The course will focus on developing skills and applying qualitative methodology in a research plan.

**KSP 685 (0) Written Comprehensive Examination**

The written comprehensive exam course should be taken with consultation with your advisor. It should be taken prior to enrolling in any research coursework and planning or completing your capstone experience.

**KSP 686 (1-4) Curriculum Design**

Supervised practical experiences in curriculum design and development. Permission required.  
Pre: consent.

**KSP 689 (3) Introduction to Technology in Education**

All formats of information technology for educational settings-learning about interactive video, microcomputers, computer networks, Internet, electronic information including bibliographic data bases, electronic newspapers, online encyclopedias, and distance education.

**KSP 690 (1-3) Workshop**

Short term graduate workshops dealing with specific subjects germane to the broader disciplines in education.

**KSP 691 (1-4) In-Service**

An intensive, often semester-long, study in areas germane to the broader disciplines within K-12 and Secondary Education.  
Pre; graduate students

**KSP 693 (1) Evaluation and Selection of Education Software**

Evaluation of educational software for K-12 schools. Selection of software for elementary and secondary collections. Integration of software into the curriculum.

**KSP 694 (1 ) Alternate Plan Paper**

For students completing a Masters degree with the alternate plan option.

**KSP 695 (1-2) Creative Projects**

For students completing a Master's degree with the creative projects option.

**KSP 698 (1-8) Internship**

Under-supervision of both graduate faculty within the K-12 and Secondary Department and appropriate cooperating supervisors of external agencies, the student will complete an internship experience which allows opportunity to apply and strengthen knowledge and skills acquired within the graduate program. (Four credits of internship are required for Media Generalist Licensure).

**KSP 699 (1-6) Thesis**

For students completing a Masters or Specialist degree with the using the thesis option.

**ENGINEERING MS**

*College of Science, Engineering & Technology*

*Department of Electrical and Computer Engineering and Technology*  
135 Trafton Science Center S • 507-389-5747

*Department of Mechanical and Civil Engineering*  
205 Trafton Science Center E, 507-389-6383

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The Engineering programs offer a Master of Science in engineering degree program. Students in this program may design their own program of studies by choosing courses from Electrical Engineering, Mechanical Engineering, Civil Engineering, Physics, Mathematics, and Computer Science. The program is designed to serve the following: those engineers in business and industry who want to continue their formal engineering education at the postgraduate level; new engineering graduates who want to increase their depth of knowledge and develop an area of specialization; those graduates from other related science and engineering disciplines who want to broaden their backgrounds by pursuing engineering studies at the graduate level.

**Admission.** Applicants must meet the general admission requirements of the College of Graduate Studies. A BS in Engineering or a closely related field from an accredited program with a minimum GPA of 3.0/4.0 is required. GRE scores are also required and the quantitative section score must be at least 700/800.

**Financial Assistance.** A limited number of graduate teaching assistantships are available for those individuals with substantial laboratory experience in Electrical or Mechanical Engineering or related fields. Research assistantships may be available to exceptional candidates. Half-time and quarter-time assistantships include tuition waivers (18 credits maximum). It is recommended that applications for financial assistance be made by February 28 because announcements are typically made prior to the end of April for the Fall semester.

**MSE Program Options**

The MSE offers three program options:

1. **Thesis Option** – The thesis program requires 32 credit hours of which at least 3, but no more than 6 semester credit hours will be devoted to the thesis.
2. **Alternate Plan Paper** – This plan requires a total of 34 semester credit hours with 1 credit hour devoted to the preparation of an alternate plan paper.
3. **Design Option** – The design option requires 32 credit hours of which at least 3, but no more than 6 semester credit hours will be devoted to the design.

In all cases MSE students must:

1. Obtain a minimum of 50% of all credit hours at the 6XX level
2. Take between 26 and 33 credits from courses in Electrical Engineering, Physics, Mathematics, Mechanical Engineering, Civil Engineering, or Computer Science
3. Obtain the approval of their major advisor and committee of their planned program of graduate study
4. Pass the comprehensive examination
5. Students choosing Thesis or Design options must present results of their work to their committee.

**Combined Degree (BS and MS) Program**

Students planning on completing their MSE degrees at Minnesota State Mankato may be granted permission to take classes that would count toward their MSE. In order to be granted permission for this option, students must declare their intent to complete their MSE following their BS in engineering degrees and be "conditionally qualified" for a graduate program. Upon being accepted, students will be assigned a graduate committee by the department. Students need to be aware that acceptance into this option does not guarantee them automatic admission into the graduate school. In particular, students must complete their BSME, BSEE, or BSCE with a 3.0 GPA, and apply to be admitted as per the existing graduate school policy. Please contact the Department Graduate Coordinator for detailed information.

**General Requirements**

Each student must pass the comprehensive exam in order to graduate. The comprehensive exam will be given twice a year and each student has two opportunities to pass the

exam. Students planning to take the comprehensive exam must submit a completed Written Comprehensive Examination Request and Report form to their department graduate coordinator. This request must be made one month before the exam in each semester. Students must complete at least 24 credits before they can take the comprehensive exam. The exact date will be posted on Department Bulletin Boards.

**Required Thesis or Alternate Plan Paper**

EE	694	APP (1) OR
ME	694	APP (1)
EE	699	Thesis/Design (3-6) OR
ME	699	Thesis/Design (3-6)

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**COURSE DESCRIPTIONS****MECHANICAL ENGINEERING****ME 516 (3) Thermal/Fluid Systems Design**

The application of the principles of thermodynamics, fluid mechanics, and heat transfer to the design and analysis of selected energy systems of current interest, such as nuclear, solar, geothermal, and also conventional systems. Lecture and design projects.

Prerequisite: ME 324, ME 329

**ME 518 (3) Mechanical Systems Design**

The application of mechanics to the design and analysis of motion and force transmitting systems. Optimal design.

Prerequisite: ME 417

**ME 520 (3) Computer Aided Engineering**

Theoretical background in, and hands-on application of, both solid modeling and finite element methods. CAE Systems, Graphical standards, databases, solid modeling techniques. Derivation and solution of finite element equations for various types of elements and systems. Extensive use of modern software to perform both design and analysis.

Co-requisite: senior standing in ME

**ME 522 (3) Mechanics of Composite Materials**

Introduce anisotropic mechanics theories, engineering application of various composite materials, mechanical behaviors and fabrication of composites, experimental and theoretical approach for composite designs, contemporary issues such as nano/microcomposites.

Prerequisite: ME 223

**ME 523 (3) Intermediate Mechanics of Materials**

Stresses and deformation of curved beams, beams on elastic foundations, indeterminate problems, torsion of noncircular bars, introduction to plates and shells, thick walled cylinders, and failure theories.

Prerequisite: ME 417

**ME 525 (3) Thermal Analysis & Control of Electronic Equipment**

Thermal consideration in the design of heat-exchange equipment. Review of heat transfer modes; contact resistance; air handling. Numerical methods. Cooling techniques; fins, extended surfaces, cold plates, heat pipes, immersion cooling, thermoelectric coolers. Enhanced heat transfer.

Prerequisite: ME 324

**ME 526 (3) Aerosol Theory and Technology**

Introduction to the theory of aerosols and particulate systems. Properties, behavior, and physical principles of aerosols; including particle size statistic, Brownian motion and diffusion, and coagulation. Application in areas such as environmental systems, respiratory deposition, bioterrorism, and materials processing.

Prerequisite: ME 324.

**ME 527 (3) Kinematics & Dynamics of Mechanisms**

Computer-oriented methods of synthesis. Burmester's theory. Fixed and moving centrodes and their application to synthesis. Dynamics of mechanisms. Force and moment balancing of linkages.

Prerequisite: ME 417

**ME 528 (3) Design Project I**

The first course in a semester sequence that provides a complete design experience under professional guidance. This course covers: the product realization process,

financial analysis, quality, patents, ethics and case studies. The students initiate a design project early in the semester to be completed in ME 538.

Prerequisite: Senior standing in Mechanical Engineering

### ME 529 (3) Energy Conversion

Methods of energy conversion. Topics may include hydroelectric, geothermal, wind and solar power generation, as well as unconventional methods of energy conversion. Term design problems.

Prerequisite: ME 324, ME 329

### ME 533 (3) Design for Manufacture & Assembly

Current design for assembly (DFA) techniques are discussed. Both "manual" and software approaches are utilized, and enforced with numerous examples. Design for manufacturability (DFM) is addressed for many common manufacturing processes including: sheet metal, casting, forging, plastics, machining, snap fits, elastomers, surface finishes/protective finishes, powdered metal, and extrusions. Recent DFM software is utilized. Class project required.

### ME 538 (3) Design Project II

The second course of a two semester sequence (see ME 528). This course includes: completion of the design project, design presentations, design report, design evaluations and manuals.

Prerequisite: Senior standing in Mechanical Engineering

### ME 539 (3) Air Conditioning & Refrigeration

Refrigeration cycles and equipment, refrigeration properties, heating and cooling loads, psychometric analysis of air conditioning. Distribution of air conditioning medium and air quality as applied to design.

Prerequisite: ME 324, ME 329

### ME 541 (3) Vehicle Dynamics

The dynamics of ground vehicles is studied, including pneumatic tires, vehicle handling, vehicle performance (including transmissions), modeling & simulation, and current research topics such as ITS/AVCS (Intelligent Transportation Systems Program/Advanced Vehicle Control Systems). Emphasis is on fundamentals, simulation, and limited experimentation. Class project required.

Prerequisite: Senior standing in Mechanical Engineering

### ME 543 (3) Theory of Elasticity

Fundamental equations in three dimensions, plane stress and plane strain, flexure and torsion of bars of various shapes.

Prerequisite: ME 417

### ME 550 (3) Finite Element Method

Energy method and residual approaches, 2D and 3D problems, in stress analysis, application to steady and transient heat flow, hydrodynamics, creeping flow, solution methods.

Prerequisite: ME 323 and ME 324

### ME 562 (3) Vibrations

Free and forced vibration in linear single degree of freedom systems, design and analysis of multiple degree of freedom systems with and without damping, and vibration of coupled systems.

Prerequisite: ME 323, ME 341

### ME 563 (3) Automatic Controls

Analysis of control systems using the methods of Evans, Nyquist, and Bode. Improvement of system performance by feedback compensation. Introduction to digital control.

Prerequisite: ME 341

### ME 564 (3) Mechatronics

Synergistic combination of mechanical engineering, electronics, controls and programming in the design of mechatronic systems. Sensors, actuators and microcontrollers. Survey of the contemporary use of embedded microcontrollers in mechanical systems, case studies.

Prerequisite: ME 417, ME 463

### ME 572 (3) Intermediate Heat Transfer

Basic concepts; physical and mathematical models for heat and mass transfer. Applications to conductive, convective, radiative, and combined mode heat transfer.

Prerequisite: ME 324

### ME 591 (1-4) In-Service

Individual studies of problems of special interest. Open only to advanced students.

### ME 597 (1-6) Internship

### ME 582 (3) Transport Phenomena

### ME 599 (1-6) Individual Study

### ME 601 (3) Advanced Computational Methods in Engineering

Numerical methods for solving linear systems of equations, solution of non-linear equations, data interpolation, numerical differentiation, numerical integration, numerical solution of ordinary and partial differential equations.

### ME 602 (3) Advanced CAE

Investigation, review, and application of emerging computer aided tools for engineering. Advanced FEA; optimization.

Prerequisite: ME 323, ME 324

### ME 603 (3) Computational Fluid Mechanics and Heat Transfer

Numerical methods (finite difference, finite volume, finite element) used for solving partial differential and integral equations of the type commonly occurring in fluid mechanics and heat transfer. Numerical solutions for selected problems in fluid mechanics and heat transfer. Use of CFD software.

### ME 604 (3) Advanced CAD Techniques

This course helps the students develop an ability to define optimal design methodologies that will best implement the design intent and generate efficient designs. Various problems involving the use of modern, high-end industry standard software systems will be solved.

Prerequisite: ME 520.

### ME 605 (3) Analysis and Design of Propulsion Systems

Prepares student to engage in analysis and design of modern propulsion systems. It is centered on the fundamentals of jet propulsion. Topics include: Thermodynamic cycle of the jet engine, Gas generator, Inlet, Compressor, Combustion Chamber, Gas Turbine, Nozzle, Afterburning Engines, Losses and performance estimation. Principles of construction, types of systems.

Prerequisite: ME 321, ME 329.

### ME 606 (3) Engineering Aerodynamics

This course deals with the principles and theory of flying of heavier-than-air machines. Topics include: Properties of the atmosphere, basic lift theory, aerodynamics of the airplane, moments acting on the airplane, fundamental principles of aircraft stability and control, introduction to performance estimation (takeoff, landing, climb, cruise, maneuverability). Introduction to supersonic flight. Prerequisite: ME 321.

### ME 612 (3) Reinforced Polymers

Mechanics, materials analysis, fabrication, characterization, performance of Reinforce Polymers.

Prerequisite: ME 303

### ME 623 (3) Experimental Stress Analysis

Review of elastic stress-strain relationships; application of fundamental concepts of static and dynamic strain measurements by electrical means; theory and use of resistance gages, strain gage circuits and recording instruments; rosette analysis. Introduction to phototetelastcity.

Prerequisite: ME 323

### MET 627 (3) Six Sigma from an Industrial Perspective

Basics of Six Sigma from an industrial perspective. Emphasis is on practical application of concepts. Upon completion of course, the student will be familiar on a working level with Six Sigma tools leading to Green Belt certification level.

### ME 633 (3) Dynamics of Ground Vehicles

Theory and engineering principles of non-guided ground vehicles, both road and off-road. Analysis and evaluation of performance characteristics, handling behavior and ride quality. Emphasis is on fundamental principles and a unified method of approach to the analysis of various types of ground vehicles.

Prerequisite: ME 341

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## ENGINEERING

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### ME 640 (3) Advanced Design of Mechanical Devices

Systematic design of mechanisms, the creation of force functions, mechanisms with two or more degrees of freedom, systematic development of adjustable mechanisms, methods to achieve high speed in automatic machines.  
Prerequisite: ME 327

### ME 651 (3) Transport Phenomena

A survey of the transport of momentum, energy, and mass. Continuum approach. Equations of change. Applications.

### ME 655 (3) Advanced Fluid Mechanics

Detailed analysis of incompressible fluids, viscous/inviscid, laminar/turbulent and developing flows.  
Prerequisite: ME 321

### ME 665 (3) Combustion

Thermodynamics and chemical kinetics of combustion. Structure, propagation, and stability of flames. Environmental aspects.  
Prerequisite: ME 321, ME 329

### ME 669 (3) Advanced Energy Systems

Advanced selected topics in energy conversion, theory, design, and applications. Individual projects dealing with various aspects of advanced energy systems and associated energy sources.  
Prerequisite: ME 324, ME 329

### ME 672 (3) Conduction Heat Transfer

Analytical and numerical techniques for analysis of problems involving steady-state and transient heat conduction in solids.  
Prerequisite: ME 324

### ME 677 (1-6) Individual Study

### ME 682 (1) Mechanical Engineering Graduate Seminar

Presentation and discussion of student research progress as well as topics important to the professional engineering field. May include guest speakers, tours, and student presentations. May be retaken with change in topic.

### ME 687 (1) Mechanical Engineering Practicum

Practical experience in the various activities of a practicing engineer. Admission to the ME program required. Can be repeated for a max of 3 credits of ME687 and ME697 combined.

### ME 691 (1-4) In-Service: Technical Elective

### ME 694 (1) Alternate Plan Paper Research

### ME 697 (1-3) Advanced Mechanical Engineering Internship

Supervised lab or industry field work in an area related to the individual's field of study beyond the Bachelor's degree. Admission to the ME program required. Can be repeated for a max of 3 credits of ME687 and ME697 combined.

### ME 699 (1-4) Thesis

## CIVIL ENGINEERING

### CIVE 532 (3) Properties of Concrete

Selected studies in the properties and design of concrete mixtures, cement chemistry, concrete durability, specialty concretes, concrete construction, admixtures, and quality control.  
Prerequisites: CIVE 436 or consent of instructor.

### CIVE 552 (3) Open Channel Flow

Analysis of open channel flow systems. Includes natural channels, designed channels, flow transitions, steady flow, unsteady flow, uniform flow, and non-uniform flow.  
Prerequisites: CIVE 350.

### CIVE 554 (3) Hydraulic Structures

Analysis and design of water regulating structures. Includes dams, spillways, gates, dikes, levees, stilling basins, water distribution systems, and various simpler structures. Environmental impacts of hydraulic structures are discussed throughout the course.  
Prerequisite: CIVE 350.

### CIVE 558 (3) Storm Water Management

Application of fluid mechanics and hydrology to the design of storm water management facilities.  
Prerequisite: CIVE 350.

### CIVE 561 (3) Fundamentals of Pavement Design

Performance and design of rigid, flexible, and composite pavement structures with emphasis on modern pavement design procedures. Principles of pavement maintenance and rehabilitation, and pavement management systems. Materials characterization, tests, quality control, and life cycle cost analysis.  
Prerequisite: ME/CIVE 23, CIVE 360, and CIVE 370.

### CIVE 567 (3) Earth Structures

Design and construction of traditional embankments, including slope stability analysis; earth and rockfill dams, including introduction to seepage analysis; excavations, earth retaining structures, and other geotechnical structures. Geotechnical software application in analysis and design.  
Prerequisite: CIVE 360.

### CIVE 571 (3) Highway Planning and Design

Introduces the classification and design process of highways; development and use of design controls, criteria, and highway design elements design of vertical and horizontal alignment, and establishment of sight distances design of cross-sections, intersections, and interchanges.  
Prerequisite: CIVE 271 and CIVE 370.

### CIVE 576 (3) Planning and Design of Airports

Development and design of airport facilities and the integration of multiple disciplines including runway orientation and capacity, terminal facilities, forecasting, planning, noise, airspace utilization, parking, lighting, and construction.  
Prerequisite: CIVE 370

### CIVE 581 (3) Water & Wastewater Treatment, Collection and Distribution

Overview of municipal water and wastewater treatment and distribution practices Application of chemical, biological and physical principles to design and operation of water and wastewater treatment and distribution systems.  
Prerequisite: CIVE 380

## ELECTRICAL ENGINEERING

### EE 539 (4) Electronics for Non-Electrical Engineering Majors

### EE 550 (3) Engineering Economics

Overview of accounting and finance and their interactions with engineering. Lectures include the development and analysis of financial statements, time value of money, decision making tools, cost of capital, depreciation, project analysis and payback, replacement analysis, and other engineering decision making tools.

### EE 553 (3) Advanced Communication Systems Engineering

Fundamentals of RF, microwave, and optical communication systems. Advances information theory. Digital modulation techniques. Phase-lock loop receivers and frequency synthesizers. Characterization of digital transmission systems. Equalization. Synchronization. Coding. Data compression. Nonlinear system analysis. Amplitude and phase distortion. AM-PM conversion. Intermodulation and cross-modulation. Advanced spread spectrum systems.

### EE 562 (3) Advanced Digital Systems

A study of finite-state machine design, hardware description language, processor datapath design, principles of instruction execution, processor control design, instruction pipelining, cache memory, memory management, and memory system design.

### EE 567 (2) Principles of Engineering Design I

### EE 571 (3) Advanced Control Systems

Develops design and analysis techniques for continuous and discrete time control systems, including pole placement, state estimation, and optimal control.  
Prerequisite: EE 358 and 368

### EE 572 (3) Digital Signal Processing

Develops design and analysis techniques for discrete signals and systems via Z-transforms, implementation of FIR and IIR filters. The various concepts will be introduced by the use of general and special purpose hardware and software for digital signal processing.  
Prerequisite: EE 341

**EE 575 (3) Integrated Circuit Engineering**

Introduction to theory and techniques of integrated circuit fabrication processes, oxidation, photolithography, etching, diffusion of impurities, ion implantation, epitaxy, metallization, material characterization techniques, and VLSI process integration, their design, and simulation by SUPREM.

Prerequisite: EE 303 and EE 332

**EE 576 (3) Antennas, Propagation, & Microwave Engineering**

Principles of electromagnetic radiation, antenna parameters, dipoles, antenna arrays, long wire antennas, Microwave antennas, Mechanisms of radiowave propagation, scattering by rain, sea water propagation, guided wave propagation, periodic structures, transmission lines, Microwave millimeter wave amplifiers and oscillators, MIC & MMIC technology.

Prerequisite: EE 408

**EE 577 (2) Principles of Engineering Design II****EE 578 (1-4) Topics in Engineering****EE 579 (3) Superconductive Devices**

Magnetic and superconducting properties of materials, microscopic theory of superconductivity, and tunneling phenomenon. Josephson and SQUID devices, survey of computer memories, memory cell and shift register, A/D converters, and microwave amplifiers. Integrated circuit technology and high temperature superconductors.

Prerequisite: EE 303

**EE 580 (1) Integrated Circuit Fabrication Lab**

Introduction to integrated circuit fabrication processes, device layout, mask design, and experiments related to wafer cleaning, etching, thermal oxidation, thermal diffusion, photolithography, and metallization. Fabrication of basic integrated circuit elements including PN junction, resistors, MOS capacitors, BJT and MOSFET in integrated form. Use of analytic tools for in-process characterization and simulation of the fabrication process by SUPREM.

Prerequisite: EE 4/575 or concurrent with EE 4/575

**EE 581 (1) VLSI Design Laboratory**

Laboratory to accompany EE 584 VLSI design. Individual IC design projects will be assigned using IC layout tools and simulation software. Culminates in a group project fabrication under MOSIS.

Prerequisite: concurrent with EE 584

**EE 584 (3) VLSI Design**

VLSI technology. MOS and Bipolar transistor theory, SPICE models. Transistor structure and IC fabrication processes; layout design rules. Custom CMOS/BICMOS logic design and layout topologies; cell layout/chip partitioning/clocking. Bipolar/MOS analog circuit design and layout. Group design project. Library research study.

Prerequisite: EE 303 and EE 333

**EE 591 (1-4) In-Service****EE 597 (1-6) Internship****EE 600 (3) Design Methods**

Application of EE computer modeling and simulation tools. Design of experiments, Taguchi methods, automated data acquisition, and analysis methods.

**EE 601 (3) Linear Systems Analysis**

This course covers the analysis of continuous and discrete multivariate systems, linear models of stochastic and non-stochastic systems, and analog and digital sampled data systems. Issues examined include controllability, stability, observability, tensor properties, signal spectra, state equations, optimization, and computer simulation. A variety of case studies of advanced systems also examined.

Prerequisite: BS EE including undergraduate level systems analysis course work

**EE 603 (3) Non-Linear System Analysis**

This course covers the analysis of non-linear continuous and discrete systems and devices. Topics covered include non-linear circuit analysis, non-linear stochastic and non-stochastic system models, limit cycles, oscillators, stability, non-linear wave functions. Computer simulation will be utilized in conjunction with selected case studies in advanced non-linear systems.

Prerequisite: BS EE including undergraduate level systems analysis course work

**EE 611 (3) Computer Hardware Algorithms**

Study of major paradigms used in the evaluation and execution of algorithms. Algorithm analysis will include complexity measure, hardware requirements, organization and storage system requirement.

**EE 612 (3) Computer Architecture Design**

A treatment of computer architecture covering new technological developments, including details of multiprocessor systems. Special emphasis will be devoted to new concepts. Architectures of FPGAs and CPLDs will be explored and Hardware Description Languages such as VHDL and VERILOG will be used in project assignments.

**EE 613 (3) Parallel Processors**

Computer architecture for parallel processors designed for high computation rates. Primary emphasis is on image processing, pattern recognition, etc. Performance of various systems with regard to interconnect network, fault tolerance, and programming.

**EE 614 (3) Advanced Embedded System Design**

This course covers the programming model of a contemporary microprocessor/microcontroller. The course encompasses the interfacing and applications of parallel and serial I/O devices using the parallel and serial ports such as SPI, I2C, and CAN. Industrial standard interface such as USB and Ethernet would be discussed. Development tools would be reviewed and used in projects. Multi-tasking and real-time kernel would be presented and projects would be assigned. Memory technologies and expansion issues would be reviewed and taught.

**EE 615 (3) Programmable Logic Design**

Programmable logic design, simulation, synthesis, verification, and implementation using a Hardware Description Language (HDL), industry standard tools, and prototyping hardware. Mixed-level modeling including gate-level, dataflow and behavioral levels. HDL language constructs and design techniques. Logic timing and circuit delay modeling. Programming Language Interface (PLI). Advanced verification techniques.

**EE 620 (3) Advanced Embedded Networking**

Study the ZigBee and IEEE 802.15.4 wireless specifications and develop embedded products with wireless communication capabilities for sensor intensive and control applications. An 8-bit or a 16-bit microcontroller will be used to implement the target hardware and software.

**EE 621 (3) Advanced Engineering Electromagnetics**

Wave equations, solutions, wave propagation and polarization, reflection and transmission, rectangular wave guides and cavities, strip line and microstrip lines, and geometric theory of diffraction.

Prerequisite: EE 350 or equivalent

**EE 622 (3) Microwave Engineering**

Active and passive microwave devices, microwave amplifiers and oscillators, microwave filters, cavity resonators, microwave antennas, microwave receivers, microwave transmitters.

**EE 623 (3) Radiation & Optical Electronics**

Coherent and incoherent radiation, optical resonators, laser oscillators and amplifiers, propagation in optical fibers, integrated optical dielectric wave guides, semiconductor lasers, wave propagation in anisotropic, and non linear media, detection and noise.

Prerequisite: EE 350 or equivalent

**EE 632 (3) Noise & Information Theory**

Selected topics in the theory of probability and statistics. Spectral analysis. Rayleigh, Rician, Gaussian, and Poisson processes. Noise figure. Signal-to-noise ratio requirements for analog and digital communications, remote sensing, radar and sonar. Random signals in linear and nonlinear systems. Signal-to-noise enhancement techniques. Source encoding. Shannon's theorems.

**EE 633 (3) Digital Communications**

Digital communication system modulation techniques. A/D conversion. Additional noise sources from sampling and encoding. Error detection and correction. Speech encoding. Data compression. Data networks. Companding. Multiplexing. Packet switching. Performance of digital baseband. Digital Signal Processing. Digital system design trade-offs.

## ENGLISH

### EE 642 (3) Advanced Integrated Circuit Engineering

Principles of silicon integrated circuit fabrication processes and design limitations. Process modeling, crystal growth, oxidation, implantation, diffusion, deposition. Processing of bipolar and MOS devices and circuits. Photolithography and design rules. Introduction to GaAs technology. Use of SUPREME.  
Prerequisite: EE 4/575

### EE 643 (3) Advanced VLSI Design

Design and layout of passive and active electronic devices in silicon integrated circuits, both digital and analog. CMOS and bipolar circuit design principles will be developed. Assembly techniques and process control measurements and testing for yield control will be introduced.  
Prerequisite: EE 4/584

### EE 651 (3) Biomedical Engineering I

Mathematical modeling of living systems. Entropy and information. Thermodynamic constraints. Feedback and feedforward mechanisms in metabolic processes. Metabolic heat generation and loss. Energy flow in living systems. Atomic and molecular bonds in biological systems. Engineering analysis of the cardiovascular, renal, immune, endocrine and nervous systems; analysis of specific disease states.

### EE 652 (3) Biomedical Engineering II

Physiological transport phenomena (intercellular, intracellular and membrane transport), strength and properties of tissue, bioelectric phenomena, muscle contraction, cardiovascular and pulmonary mechanics, design of artificial organs, diagnostic tools, therapeutic techniques in the treatment of cancer, material compatibility problems in prosthetics, and ethical dilemmas in biomedicine.  
Prerequisite: EE 651

### EE 663 (3) Advanced Communication Systems

Fundamentals of RF, microwave, millimeter wave, and optical communication systems. Link power budgets. Bandwidth constraints. Phase-locked loop receivers. Matched filters. Spread spectrum communication systems. Modulation formats. Comparison of active and passive sensing systems. Signal processing.

### EE 674 (3) Advanced Control Systems II

Develops analysis and design techniques for multivariable feedback systems. Definitions of poles and zeros of multivariable systems are established. Study of design methods such as LQG, Youla parametrization and H optimal control.

### EE 677 (1-4) Individual Study

Regular courses offered on demand by agreement with individual faculty members on an individual basis.

### EE 691 (1-4) In-Service

### EE 694 (1) Alternate Plan Paper

Alternate plan paper preparation.

### EE 695 (1-5) Research

Thesis research.

### EE 698 (1-4) Topics

Varied topics in Electrical and Computer Engineering. May be repeated as topics change.

### EE 699 (1-4) Thesis/Design Option

Thesis preparation.

## ENGLISH MA

(Options: General Studies, Literature, Technical Communication, Teaching English as a Second Language)

## CREATIVE WRITING MFA

College of Arts & Humanities

Department of English

230 Armstrong Hall • 507-389-2117

Fax: 507-389-5362

Web site: [www.english.mnsu.edu](http://www.english.mnsu.edu)

English at Minnesota State University offers five graduate programs. Each is designed to meet the needs of a particular audience, so each has its own entrance requirements, curriculum, reading list, comprehensive examination format, and thesis or capstone experience requirements. It is important that prospective students discuss which program best meets their needs with the department chair, the department graduate coordinator, or the individual program head.

**Graduate Assistantships.** Graduate teaching assistantships and research assistantships are available during the academic year to full-time students. Assistantships receive about \$9,000 over two semesters and full tuition remission for up to 9 credits per semester. For more information, contact the Department of English.

## ENGLISH MA

### ENGLISH STUDIES OPTION

30 Semester Credits with Thesis

34 Semester Credits with Alternate Plan Paper or Portfolio

Contact: Dr. Mary Susan Johnston

The English Studies option offers students the opportunity for broad training in English. This is a generalist degree supported by a department of highly trained specialists in the areas of literature, film, writing and linguistics. The degree is suited for secondary teachers and students who plan to teach at the post-secondary level. This degree may also serve as a basis for careers in the literary marketplace.

**Admission Requirements.** Applicants must have at least 30 semester hours in language, literature or related courses, with at least 20 credits in upper-division courses. It is highly recommended that applicants have at least one course in a literary figure and one in an upper-division linguistics course. The GRE is not required as part of admissions material for the program. Candidates whose native language is not English must have a TOEFL score of 600 or above. Application materials should include an application form, two letters of recommendation, and official undergraduate transcripts; all sent to the College of Graduate Studies and Research.

### Required Courses (9-11 credits)

ENG 651 Bibliography and Research (3)

ENG 698 Internship (3 - 4)

### Theory (3-4 credits) - One of the following

ENG 516 Film Theory (4)

ENG 625 Composition Theory (3)

ENG 671 Literary Theory (3)

ENG 679 Rhetorical Theory (3)

### Literature Seminars (6 credits): Choose 2

ENG 603 Seminar: Selected Authors (3)

ENG 605 Seminar: Shakespeare (3)

ENG 608 Seminar: British Literature to 1800 (3)

ENG 609 Seminar: British Literature after 1800 (3)

ENG 610 Seminar: American Literature to 1865 (3)

ENG 611 Seminar: American Literature after 1865 (3)

ENG 612 Seminar: Gender in Literature (3)

ENG 618 Seminar: Multicultural Literature (3)

ENG 635 Seminar: World Literature (3)

ENG 661 Seminar: Topics in Children's and Young Adult Literature (3)

**Electives (10-18 credits)**

Choose 10 - 18 credits from any 500- or 600-level English courses, in consultation with advisor.

**One of the following:**

- ENG 699 Thesis, with oral defense (3-4)
- ENG 694 Alternate Plan Paper (1-2)
- ENG 688 Portfolio (1-2)

**Additional Requirements**

At least 50% of all coursework must be at the 600-level, excluding thesis, APP, or Portfolio credits.

**LITERATURE OPTION**

30 Semester Credits – Thesis Plan  
Contact: Dr. Mary Susan Johnston

The MA English: Literature option equips students with a strong foundation in English, American, World and Multicultural literatures, as well as critical theory. This degree is suited for students interested in literature, film and writing. In addition to providing a foundation for the Ph.D. in English, the degree may serve as a basis for post-secondary teaching.

**Admission Requirements.** At least 30 semester hours in language, literature or related courses, with at least 20 credits in upper-division courses. It is highly recommended that applicants have at least one course in a literary figure and one in an upper-division linguistics course. The GRE is not required as part of admissions material for the program. Candidates whose native language is not English must have a TOEFL score of 600 or above. The application form and official undergraduate transcripts should be sent to the College of Graduate Studies and Research. The letter of application, resume, two letters of recommendation, and expository writing sample (5-10 pages) should be sent to the Department of English.

**Required Courses (12 credits)**

- ENG 606 British Literary History and Criticism (3)
- ENG 607 American Literary History and Criticism (3)
- ENG 651 Bibliography and Research (3)
- ENG 671 Seminar: Literary Theory and Criticism (3)

**Literature seminars (6 credits): Choose 2**

- ENG 603 Seminar: Selected Authors (3)
- ENG 605 Seminar: Shakespeare (3)
- ENG 608 Seminar: British Literature to 1800 (3)
- ENG 609 Seminar: British Literature after 1800 (3)
- ENG 610 Seminar: American Literature to 1865 (3)
- ENG 611 Seminar: American Literature after 1865 (3)
- ENG 612 Seminar: Gender in Literature (3)
- ENG 618 Seminar: Multicultural Literature (3)
- ENG 635 Seminar: World Literature (3)
- ENG 661 Seminar: Children's and Young Adult Literature (3)

**Electives (8-9 credits)**

Choose 8-9 credits from any 500- or 600-level English courses in consultation with advisor.

**Other Requirements**

1. Thesis: ENG 699 (3-4 credits)
2. Thesis Defense
3. Reading knowledge of a modern language or classical language by coursework or by examination. Two years of a college-level language study is generally sufficient to satisfy this requirement.

**Additional requirements**

At least 50% of all coursework must be at the 600-level, excluding thesis credits.

**TECHNICAL COMMUNICATION OPTION**

Thesis Plan - 30 credits  
Alternate Paper Plan - 34 credits  
Contact: Dr. Roland Nord

Students choosing this option will find the degree prepares them to be professional information developers, technical writers, and editors who are skilled at

using the written and spoken word, along with visuals, to effectively inform and instruct a wide range of audiences. Graduates typically pursue work in industry, teaching opportunities, or doctoral studies.

**Admission Requirements.** At least 18 semester hours in one or more of the following areas: literature, linguistics, speech, or mass communications. All applicants must submit a one-page personal statement (to the Graduate Director, Department of English), describing their background and interests in technical communication. The GRE is not required as part of admissions material for the program. Candidates whose native language is not English must have a TOEFL score of 550 or above. Application materials should include an application form, verification of the baccalaureate degree from a regionally accredited college or university, two copies of official undergraduate and graduate transcripts, sent to the College of Graduate Studies and Research.

**Required Courses: Technical Communication Core (14 credits)**

- ENG 575 Editing Technical Publications (4)
- ENG 577 Technical Documentation, Policies and Procedures (4)
- ENG 673 Research and Theory for Technical Communicators (3)
- ENG 679 Rhetorical Theory Applied to Technical Documents (3)

**Electives (9 - 16 credits)**

- ENG 568 Document Design and Usability (4)
- ENG 569 Project Management in Technical Communication (4)
- ENG 571 Visual Technical Communication (4)
- ENG 572 Topics in Technical Communication\* (4)
- ENG 573 Desktop Publishing (4)
- ENG 574 Research and Writing Technical Reports (4)
- ENG 576 Online Documentation (4)
- ENG 674 Topics in Technical Communication\* (1-3)
- EGG 678 Technical and Scientific Prose (3)
- ENG 680 Proposals (3)

\*may be repeated under various topics

**Other requirements**

- ENG 698 Internship (3-6) **AND**
- ENG 699 Thesis (3-4) **OR**
- ENG 694 Alternate Plan Paper (1-2)

**Additional Requirements**

At least 50% of all coursework must be at 600-level, excluding thesis or APP credits. Oral defense (with thesis option)

**GRADUATE CERTIFICATE IN TECHNICAL COMMUNICATION**

23 credits

Contact: Dr. Roland Nord

The graduate certificate program prepares participants for careers in technical communication, emphasizing current industry practice in the research, writing, editing, and publishing of (print or online) technical documents. Required coursework emphasizes the development of student skills in audience analysis, problem solving, and collaboration within the workplace as well as the production of text and graphics for print and online publication. Special topics courses focus on industry practice in standards and documentation, document design, web development, usability testing, international communication, or other topics of importance to technical communicators. Although 500-level courses in the graduate certificate focus on skill development and industry practice, they also explore theory and research supporting industry practice.

**Admission Requirements.** Entrance requirements for the Graduate Certificate in Technical Communication include a BA or BS degree and Technical Communication (ENG 271), Business Communication (ENG 272), or equivalent technical communication experience. The GRE is not required as part of the admissions material for this program. Candidates whose native language is not English must have a TOEFL score of 550 or above.

**Required courses in Technical Communication (15 credits)**

- ENG 571 Visual Technical Communication (4)
- ENG 575 Editing Technical Publications (4)
- ENG 577 Technical Documentation, Policies and Procedures (4)
- ENG 674 Topics in Technical Communication\* or
- ENG 680 Topics: Computer-Assisted Writing (3)

## ENGLISH

\*may be repeated under various topics; additional credits of ENG 674 or ENG 680 may be used as electives.

### Elective courses (8 credits)

ENG 568	Document Design and Usability (4)
ENG 569	Project Management in Technical Communication (4)
ENG 572	Topics in Technical Communication* (1-4)
ENG 573	Desktop Publishing (4)
ENG 574	Researching & Writing Technical Reports (4)
ENG 576	Online Documentation (4)

### TEACHING ENGLISH AS A SECOND LANGUAGE (TESL) OPTION

Thesis Plan - 30 credits

Alternate Plan Paper or Portfolio - 34 credits

Contact: Dr. Stephen Stoyhoff

Students choosing this option will find the degree appropriate preparation for teaching English as a second/foreign language, program administration, curriculum consulting, and publishing and materials development. It is designed for both native and non-native speakers of English. To enter the program, students must have an undergraduate major or minor in a relevant field (for example, English, linguistics, or a modern language other than English). Candidates in the TESL track who are native speakers of English must have a minimum of two years of a foreign language at the college level. This language requirement for native speakers may be met in-residence, but courses taken to fulfill the language requirement will not count toward the degree. Candidates whose native language is not English must have a TOEFL score of 550 or above. The GRE is not required for this program.

This is an interdisciplinary program with required coursework in both English and Modern Languages. It is also possible to earn certification in teaching English as a second language in grades K-12. For Master's candidates with an undergraduate licensure degree, the MA in TESL includes most of the courses needed for TESL certification. See the Department of Modern Languages for details.

### Alternate Plan Paper or Portfolio Option (34 credits)

#### Required TESL Courses (24 credits)

MODL 570	Theories and Methods of TESL I (4)
MODL 571	Theories and Methods of TESL II (4)
ENG 582	English Structure/Pedagogical Grammar I (4)
ENG 627	Research Seminar in TESL (3)
ENG 629	Second Language Literacy Development (3)
ENG 686	Second Language Testing (3)
ENG 689	Studies in English Linguistics (3)

#### Elective Courses (10 credits)

##### Three of the following

ENG 583	English Structure & Pedagogical Grammar II (4)
ENG 585	Language and Culture in TESL (3)
ENG 623	Language and Teaching of English (3)
ENG 630	Studies in Language & Literature (3)
ENG 631	Language Planning/Policy (3)
ENG 633	Second Language Acquisition (3)
ENG 634	Topics in TESL (3)
ENG 682	English Grammar and Discourse (3)
ENG 684	Sociolinguistics (3)
ENG 685	Materials for TESL (3)

##### Other requirement

Alternate Plan Paper or Portfolio – completed as part of ENG 627

#### Thesis Option (30 credits)

Required TESL courses (24 credits, see above)

Elective TESL courses (3 credits). Choose one 600-level course from elective courses above.

#### Thesis (3 credits)

ENG 699	Thesis (3)
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#### Additional requirements

At least 50% of all coursework must be taken at the 600-level, excluding thesis or APP credits. An oral presentation of the thesis will normally be required as well.

### Graduate Certificate in Teaching English as a Second Language (24 credits)

The graduate certificate in Teaching English as a Second Language prepares participants for careers in teaching English as a second or foreign language to adult learners in U.S. and international contexts, including in two- and four-year institutions, government and non-government organizations, and private enterprises. Coursework develops students' knowledge of how language operates with primary emphasis on the English language and the skills required to teach it effectively to adult second language learners.

#### Required courses (18 credits)

ENG 582	English Structure/Pedagogical Grammar I (4)
ENG 686	Second Language Testing (3)
ENG 689	Studies in English Linguistics (3)
MODL 570	Theory & Methods of TESL I (4)
MODL 571	Theory & Methods of TESL II (4)

Six additional graduate courses from the Department of English should be selected in consultation and with the approval of members of the student's program committee. Students will find the following courses relevant to a career in TESL.

#### Electives (6 credits)

ENG 623	Language and the Teaching of English (3)
ENG 629	Second Language Literacy Development (3)
ENG 630	History of English (3)
ENG 631	Language Planning/Policy (3)
ENG 633	Second Language Acquisition (3)
ENG 634	Topics in TESL (3)
ENG 682	English Grammar and Discourse (3)
ENG 684	Sociolinguistics (3)
ENG 685	Materials for TESL (3)
ENG 630	Studies in Language & Literature (2-3)
ENG 661	Topics in Children & Young Adult Literature (2-3)
ENG 680	Topics in Technical Communication (1-3)

#### Additional Requirements

At least 50% of all coursework must be completed at the 600-level.

### CREATIVE WRITING MFA

Thesis Plan - 48 credits

Contact: Richard Robbins, MFA

The MFA program in Creative Writing meets the needs of students who want to strike a balance between the development of individual creative talent and the close study of literature and language. Candidates in the program will find it appropriate training for careers in freelance writing, college-level teaching, editing and publishing, arts administration, and several other areas.

**Admission.** The application deadline for graduate assistantship consideration is February 1st. Applicants must submit a writing portfolio (10 pages of poetry or 20 pages of prose) and a one to two page personal statement directly to the Department of English, Creative Writing Program. To enter the program without deficiency, candidates must have the equivalent of at least a minor in English (18 semester credits in language, literature, linguistics). Students who enter with a small number of deficiencies may be allowed to make them up within their graduate program. Candidates whose native language is not English must have a TOEFL score of 550 or above. The GRE is not required for this program.

#### Research (3 credits)

ENG 672	Research and Publication in Creative Writing (3)
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#### Writing Seminars/Workshops (minimum 12 credits from the following)

(Courses are repeatable with new content.)

ENG 542	Advanced Creative Nonfiction Workshop (4)
ENG 543	Advanced Fiction Workshop (4)
ENG 544	Advanced Poetry Workshop (4)
ENG 594	English Workshop (4)
ENG 642	Creative Nonfiction Workshop (3)
ENG 643	Fiction Workshop (3)
ENG 644	Poetry Workshop (3)
ENG 649	Topics in Creative Writing (1-3)

#### Form and Technique (6 credits)

ENG 640	Form & Technique in Prose (3)
ENG 641	Form & Technique in Poetry (3)

**Contemporary Genres (6 credits)**

- ENG 646 Contemporary Prose (3)  
 ENG 647 Contemporary Poetry (3)

**Career-related (minimum 6 credits from the following)**

(Other courses acceptable with consent of advisor)

- ENG 516 Film Criticism (4)  
 ENG 541 Literary Criticism (4)  
 ENG 574 Research and Writing Technical Reports (4)  
 ENG 575 Editing Technical Publications (4)  
 ENG 577 Technical Documentation, Policies, and Procedures (4)  
 ENG 621 Introductory Workshop for Teaching Assistants (1-2)  
 ENG 622 Workshop for Teaching Assistants (1)  
 ENG 625 Seminar: Composition Theory (3)  
 ENG 649 Topics in Creative Writing: Teaching Creative Writing (3)  
 ENG 680 Topics in Computer-Assisted Writing (3)  
 ENG 687 Theory and Practice of Translation (3)  
 ENG 698 Internship (1-8)

**Electives (0 - 11 credits)**

In consultation with an advisor, select 0-11 credits of courses in categories (such as literature) not listed above.

**Thesis (4)**

- ENG 699 Thesis (4)

**Additional Requirements**

All courses must be in English with the exception of those specifically approved by the Graduate Committee in English; 75% of all coursework must be taken at the 600-level. Students must take a two-part written examination based on a reading list. Students also are required to present a reading/oral defense as part of their thesis project, a book-length collection of writing in the student's chosen genre.

**COURSE DESCRIPTIONS****ENG 503 (2-4) Selected Authors**

Content changes. May be repeated.

**ENG 516 (4) Film Theory & Criticism**

Trends in film theory and criticism. Practice in critical analysis.

**ENG 525 (2-4) Topics in Children's Literature**

Topics in genres such as fantasy and historical fiction and thematic topics such as survival or journeys. May be repeated with different subject matter.

**ENG 526 (2-4) Selected Periods**

Selected periods of literary study.

**ENG 532 (2-4) Selected Studies: Novel**

Content changes. May be repeated.

**ENG 533 (4) Selected Studies in World Literature**

Topics on themes, issues, and developments in genres of the literatures of the world. Content changes. May be repeated.

**ENG 535 (2-4) The World Novel**

A study of selected novels from a variety of time periods and cultures, including Eastern and Western Europe, Asia, Africa, and Latin America.

**ENG 536 (2-4) Native American Literature**

This course surveys the earliest Native American literary works, from oral tradition and songs to contemporary works and authors, with a particular emphasis on tribal and cultural contexts that identify these works as Native American.

**ENG 538 (2-4) African American Literature**

This course surveys the earliest African American literary works, including slave narratives, poetry, folklore, and oration, through the 20th century movements such as the Jazz Age, Harlem Renaissance, and the Black Arts movements of the 1960s, to contemporary works and authors.

**ENG 542 (4) Advanced Creative Nonfiction Workshop**

Advanced workshop in writing personal essays and literary journalism.  
 Prerequisite: writing course or consent of instructor

**ENG 543 (4) Advanced Fiction Workshop**

An advanced course in writing short stories and novels.  
 Prerequisite: writing course or consent of instructor

**ENG 544 (4) Advanced Poetry Workshop**

An advanced course in writing poems.  
 Prerequisite: writing course or consent of instructor

**ENG 545 (4) Advanced Critical Writing Workshop**

An advanced course in writing critical essays.  
 Prerequisite: writing course or consent of instructor

**ENG 546 (4) Screenwriting**

Introduction to writing for the screen  
 Prerequisite: writing course or consent of instructor

**ENG 549 (2-4) Topics in Creative Writing Form and Technique**

Topics in Creative Writing Form and Technique will be a variable-title course that explores special topics relating to the technical mastery of one or more creative genres, or the technical achievement of one or more practitioners. May be repeated with different topics.

**ENG 553 (4) Topics in Rhetoric and Composition**

Topics in Rhetoric and Composition will be a variable title course that explores special topics relating to the theory, history, and practice of one or more areas within rhetoric and composition.

**ENG 554 (4) Persuasive Writing on Public Issues**

Advanced writing course emphasizing major contemporary public issues. Practice in and study of: the logic by which writers construct arguments; the various means that writers use to persuade an audience; the conventions of evidence, claims, and argument in persuasive discourses.

**ENG 555 (4) Advanced Writing Workshop**

Advanced interdisciplinary writing emphasizes critical reading and thinking, argumentative writing, library research, and documentation of sources in an academic setting. Practice and study of selected rhetorics of inquiry employed in academic disciplines preparing students for different systems of writing.

**ENG 563 (4) Adolescent Literature**

A survey of literature for students in grades 5-12, fiction and nonfiction, and methods of teaching this literature.

**ENG 564 (3) Teaching Literature in Middle School**

Survey of books suitable for the Middle School classroom, covering a variety of topics and genres.

**ENG 565 (1-4) World Literature for Children and Young Adults**

Selected works of literature for students in grades 5-12 from a variety of countries and cultures.

**ENG 568 (4) Document Design and Usability**

Covers approaches to the design, development, and testing of (print and online) technical documents, focusing on feedback-driven design and usability testing.

**ENG 569 (4) Project Management in Technical Communication**

This course is designed to introduce students to technical project management. This introduction is achieved through participation in a simulated project management experience. Assignments include standard documentation associated with project management and reflective writing.

**ENG 571 (4) Visual Technical Communication**

Analysis and training focused on concepts and practices of visual design as they relate to technical and professional communication.

**ENG 572 (1-4) Topics in Technical Communication**

Topics in theory and practice of technical communication. Hands-on course which implements the theories discussed. May be repeated with different subject matter.

**ENG 573 (4) Desktop Publishing**

Overview of publishing and typography, conventions of desktop publishing, and hardware and software application tools for desktop publishing. Students need not have prior experience with DTP, but some word processing and microcomputer experience will be helpful. Course will meet in both PC and Macintosh labs.

**ENG 574 (4) Research and Writing Technical Reports**

Practice in writing various types of reports for a variety of purposes and audiences. Includes study of primary and secondary research methods.  
Prerequisite: ENG 271 or equivalent

**ENG 575 (4) Editing Technical Publications**

Editing the content, organization, format, style, and mechanics of documents; managing the production cycle of documents, and discovering and learning microcomputer and software applications for technical editing tasks.

**ENG 576 (4) Online Documentation**

Introduction to the conventions and strategies for publishing on-line documentation and for managing on-line documentation projects. Topics include analyzing users and tasks, designing and writing documents to be published on-line, testing on-line documents, and managing on-line documentation projects.

**ENG 577 (4) Technical Documentation, Policies, & Procedures**

Creating both on-line and hard copy documentation for products, with emphasis on computer software and hardware documentation. Attention also to policies and procedures as written for a range of uses (e.g., employee handbooks and manufacturing processes) and to usability testing.

**ENG 581 (3) History of English Language**

The development of English from its origins as a dialect of Proto-Indo-European to its current form, with consideration of its social history as well as its formal development.

**ENG 582 (4) English Structure and Pedagogical Grammar I**

The English sound system and English sentence structure studied for the purpose of discovering how they can be taught to students of English as a second or foreign language.

**ENG 583 (4) English Structure and Pedagogical Grammar II**

The English sound system and English sentence structure, and content-based language instruction.

**ENG 585 (3) Language and Culture in TESL**

A consideration of the cultural issues encountered by teachers of English as a second or foreign language in the U.S. and abroad.

**ENG 592 (2-4) Selected Topics**

Topics in literary study. May be repeated with change of topic.

**ENG 594 (1-6) English Workshop**

Specialized workshops in topics such as computer-assisted writing, teaching the writing of poetry in the secondary school, or discipline-specific writing.

**ENG 595 (1-4) Special Studies**

Specialized, in-depth study of topics such as Holocaust literature, environmental literature, or regional literature. May be repeated with different subject matter.

**ENG 603 (3) Sem: Selected Authors**

Studies in selected authors in British, American, Multicultural, or World Literature. May be repeated with different subject matter.

**ENG 605 (3) Sem: Shakespeare**

Study of works of Shakespeare, including comedies, histories, tragedies, tragicomedies, and some shorter poetic works, including sonnets.

**ENG 606 (3) British Literary History and Criticism**

The course focuses on the major writers, genres and periods in British literature with an emphasis on historical and critical trends in order to provide an analytical framework that will support subsequent work. Must be taken during the student's first year in the program.

**ENG 607 (3) American Literary History and Criticism**

This course is designed to give first-year graduate students a foundation in American

literary history and criticism. The course focuses on the major writers, genres and periods in American literature with an emphasis on historical and critical trends in order to provide an analytical framework that will support subsequent work. Must be taken during the student's first year in the program.

**ENG 608 (3) Sem: British Literature to 1800**

Studies in topics/periods in British Literature to 1800. Emphasizes close readings of primary works, analysis of pertinent secondary works, detailed class discussion, and analytical writing. May be repeated with different subject matter.

**ENG 609 (3) Sem: British Literature after 1800**

Studies in topics/periods in British Literature after 1800. Emphasizes close readings of primary works, analyzing pertinent secondary works, detailed class discussion, and analytical writing. May be repeated with different subject matter.

**ENG 610 (3) Sem: American Literature to 1865**

Analysis of topics/periods in American Literature before 1865. Emphasizes close reading of primary works, analysis of pertinent secondary works, detailed class discussion, and analytical writing. May be repeated with different subject matter.

**ENG 611 (3) Sem: American Literature after 1865**

Analysis of topics/periods in modern and contemporary American Literature, i.e. fiction, nonfiction, poetry, and drama. Emphasizes close reading of primary works, analysis of pertinent secondary works, detailed class discussion, and analytical writing. May be repeated with different subject matter.

**ENG 612 (3) Sem: Gender in Literature**

Study of selected works by women writers up through the twentieth century with attention to their works within cultural contexts. May be repeated with different subject matter.

**ENG 618 (3) Seminar: Multicultural American Literature**

Studies in selected authors, topics, or periods of American multicultural literatures, particularly those of Native American, African American, Chicano/Latino American, and Asian American groups. Emphasizes close readings of primary works, analyzing secondary sources, and analytical writing. May be repeated with different subject matter.

**ENG 621 (1-2) Introductory Workshop for Teaching Assistants**

Introductory workshop in composition pedagogy for first-year teaching assistants.

**ENG 622 (1-2) Workshop for Teaching Assistants**

Continued workshop in composition pedagogy for first-year teaching assistants.

**ENG 623 (3) Language & Teaching of English**

Study of language issues for teachers of English. Intended for those teaching in "mainstream" classrooms populated by a majority of native speakers of English as well as those teaching English as a second or foreign language.

**ENG 625 (3) Seminar: Composition Theory**

Introduction to the major theories of the nature of composition and their pedagogical application.

**ENG 626 (3) Bibliography & Research in TESL**

Introduction to the types and principles of research in teaching English as a second or foreign language.

**ENG 627 (3) Research Seminar in TESL**

Provides students with an opportunity to be immersed in the research process and to select, organize, analyze, synthesize and present research. Supports students' development of theses and alternate plan papers.

**ENG 629 (3) Second Language Literacy Development**

Study of literacy from a socioliterate perspective. Intended to promote acquisition of multiple literacies.

**ENG 630 (2-3) Studies in Language & Literature**

Topics in a broad range of English studies. May be repeated with different subject matter.

**ENG 631 (3) Language Planning/Policy**

Study of governmental efforts to influence or regulate language use, viewed from a world-wide perspective.

**ENG 632 (3) Bilingualism/2nd Language Contact**

Study of the social environments where more than one language is spoken and the effects upon individuals of living in such environments.

**ENG 633 (3) Second Language Acquisition**

Study of how languages other than one's mother tongue are learned.

**ENG 634 (3) Topics in TESL**

Topics in the area of teaching English as a second language. May be repeated with a different subject matter.

**ENG 635 (3) Sem: World Literature**

Studies in selected national literature or in topics/periods of world literature. May be repeated with different subject matter.

**ENG 640 (3) Form and Technique in Prose**

Study of the technical underpinnings of fiction and non-fiction.

**ENG 641 (3) Form and Technique in Poetry**

Study of the technical underpinnings of poetry.

**ENG 642 (3) Creative Nonfiction Workshop**

Workshop in writing personal essays and literary journalism.  
Prerequisite: consent of instructor

**ENG 643 (3) Fiction Workshop**

Workshop in fiction writing.  
Prerequisite: consent of instructor

**ENG 644 (3) Poetry Workshop**

Workshop in poetry writing.  
Prerequisite: consent of instructor

**ENG 645 (3) Multi-genre Creative Writing Workshop**

This course is a creative writing workshop for English or non-English graduate students who are not currently admitted to the MFA program.

**ENG 646 (3) Contemporary Prose**

Study and analysis of selected works in fiction and nonfiction since 1945.

**ENG 647 (3) Contemporary Poetry**

Study and analysis of poetry since 1945.

**ENG 649 (1-3) Topics in Creative Writing**

Topics relating to creative writing. May be repeated with different subject matter.

**ENG 651 (3) Bibliography & Research**

Cornerstone course of MA English Literature: Literature and MA English: English Studies options, covering research and critical writing strategies for master's level and professional work in the field. Enables students to develop a concrete focus for the thesis (Literature and English Studies) or alternate plan paper proposal (English Studies).

**ENG 661 (2-3) Topics in Children's & Young Adult Literature**

Topics of interest to the teacher or professional working in the field of children's and young adult literature. May be repeated with different subject matter.

**ENG 662 (2-3) Topics in English Education**

Topics such as writing assessment, teaching poetry, and teaching writing in the secondary schools. May be repeated with different subject matter.

**ENG 670 (1-3) Independent Writing**

Individualized study in writing.  
(Creative writing majors may take up to 3 credits total.)

**ENG 671 (3) Seminar: Literary Theory and Criticism**

Advanced study of theories of literature and its production and use.

**ENG 672 (3) Research & Publication in Creative Writing**

Exploration of the business of creative writing and the tools for writing and research in the field.

**ENG 673 (3) Research & Theory Technical Communications**

Seminar for students engaged in conducting a major research project in the technical communication field. Emphasizes theoretical approaches to research, development and implementation of the individual research project, and presentation and publication opportunities in professional writing.

**ENG 674 (1-3) Topics in Technical Communication**

Topics relating to rhetorical theory in the workplace, including examination of how workplace cultures shape writing assumptions and approaches. May be repeated with different subject matter.

**ENG 677 (1-4) Individual Study**

Focused study on a topic not covered in regularly scheduled courses.

**ENG 678 (3) Technical & Scientific Prose**

Analysis of fiction and literary nonfiction that treats technical and scientific themes.

**ENG 679 (3) Rhetorical Theory Applied to Technical Documents**

Rhetorical theory applied to technical documents, including an examination of how workplace cultures shape writing assumptions and approaches.

**ENG 680 (3) Proposals**

Theory and practice in the development and production of proposals, focusing on the researching, writing, and management of proposals by technical communicators.

**ENG 682 (3) English Grammar and Discourse**

Advanced study of English syntax.

**ENG 684 (3) Sociolinguistics**

Study of the interaction of language use and social structures.

**ENG 685 (3) Materials for TESL**

Location and assessment of commercial materials and creation and publication of original materials to support instruction in English as a second or foreign language.

**ENG 686 (3) Second Language Testing**

Introduction to language tests and the assessment of various language abilities.

**ENG 687 (3) Theory & Practice Translation**

Literary and non-literary translation.

**ENG 688 (1-4) Portfolio**

This course will involve the preparation of a portfolio in consultation with the instructor.

**ENG 689 (1-4) Studies English Linguistics**

Studies in theoretical and applied linguistics. May be repeated with different subject matter.

**ENG 691 (1-3) Colloquium**

Advanced studies in language, literature, film, or theory. Permission required.

**ENG 694 (1-2) Alternate Plan Paper**

Independent capstone experience, focusing on secondary research sources; paper may have other guidelines specific to the program option.

**ENG 698 (1-6) Internship**

On-site field experience, the nature of which is determined by the specific needs of the student's program option.

**ENG 699 (1-4) Thesis**

Independent capstone experience, guidelines of which are determined by the requirements of a particular program option.

## ENVIRONMENTAL SCIENCES

### ENVIRONMENTAL SCIENCES MS

College of Science, Engineering & Technology  
Biological Sciences  
242 Trafton Science Center S • 507-389-2786

The Graduate Program in Environmental Sciences offers the student the opportunity for study in the areas of environmental quality, restoration and natural resources. These areas encompass a broad range of practical problems which cross the boundaries of applied natural sciences, mathematics, economics, management and law.

This program provides flexibility and a multidisciplinary basis. This is accomplished by drawing on the expertise from many departments at Minnesota State University, Mankato. The focus of research and/or teaching available in the Environmental Sciences Program includes: Environmental Monitoring, Environmental Toxicology, Environmental Microbiology, and Environmental Assessment.

The Master's Thesis Option is strongly encouraged, however, a non-thesis option is also available.

**Admission.** In addition to meeting the general admission requirements of College of Graduate Studies and Research, students must have completed the following courses with a minimum grade of C: One year of Chemistry, College Algebra, General Ecology, and Plant Science or Animal Diversity. Students lacking some of the admission requirements may be conditionally admitted to the program. Conditionally admitted students are given one academic year to complete coursework deficiencies.

**Graduate Assistantships.** Environmental Sciences is a Program in the Department of Biological Sciences. Graduate assistantships are available through the Department of Biological Sciences.

**Occupational Outlook.** There are diverse opportunities for employment in the area of environmental sciences. Numerous opportunities exist in environmental analysis and monitoring of environmental media (water, soil, air, indoor air, organisms, food, biological fluids, etc.). There are positions available in the regulation and monitoring of agricultural activities such as management of feed lots and septic systems; and in water planning on the county, regional, and state level. Moreover, there are positions in industrial (work place environment), data management, chemical evaluation, quality control and quality assurance and geographic information systems (GIS).

There is also a need for persons with Environmental Science coupled with emphasis in Business, Economics, Political Science, and/or Urban and Regional Studies.

Potential employers include the Environmental Protection Agency (EPA); U.S. Geological Survey; the Department of Agriculture; the Food and Drug Administration (FDA); other federal, state and local government agencies, as well as private industry. Many of these employers study chemicals to determine if they are harmful, their mode of action, how they move in the environment, and whether they are carcinogenic or teratogenic (causing cancer or birth defects). The Environmental Sciences Program works with the EPA, as well as other federal and state agencies, to secure grants which support faculty and graduate student research. These contacts may lead to internships and/or permanent employment opportunities for graduates.

Professional positions are usually available for persons with hands-on experience in analytical instrumentation used in the detection of environmental contaminants, environmental modeling, data management including quality control and quality assurance, and geographic information systems. Employment is often secured through contacts with advisors, industry, internships and other links between the Environmental Sciences Program with state and federal agencies and institutions. Students also interview for jobs at meetings held by such professional organizations as the American Chemical Society. The Career Development and Counseling Center at Minnesota State University, Mankato is another source of job information and offers workshops that help students prepare credentials and interview skills.

**Advising, Thesis Track (30 Credits).** At the end of the first academic year the student should select a permanent advisor, an area of emphasis and a research thesis topic. The student with his/her advisor should select members from the graduate faculty to serve on the advisory committee. The advisory committee usually

consists of 3-5 graduate faculty members. The advisory committee must include two members of the Department of Biological Sciences. The advisory committee is chaired by the student's advisor. The advisory committee reviews and approves the student's coursework, research, and thesis. A thesis will prepare students for the more technical fields or doctoral programs.

**Advising, Alternate Plan Paper (34 Credits).** At the end of the first academic year, the student should select a permanent advisor and an area of specialization. The student with his/her advisor should select members from the graduate faculty to serve on the advisory committee. The advisory committee usually consists of 3-5 graduate faculty members. The advisory committee must include two members of the graduate faculty from the Department of Biological Sciences. The advisory committee reviews and approves the student's course work and Alternate Plan Paper.

### ENVIRONMENTAL SCIENCE MS

#### Required Core (16 credits)

ENVR 540	Environmental Regulations (3)
ENVR 550	Environmental Pollution and Control (3)
ENVR 560	Analysis of Pollutants (4)
BIOL 510	Global Change Biology (3)
ENVR 570	Environmental Assessment (3)

#### Required Environmental Science Electives (6 credits)

##### Choose two courses from the following:

URSI 604	Zoning & Legal Issues (3)
URSI 609	Applied Urban Analysis (3)
URSI 661	Long-Range & Strategic Planning (3)
URSI 662	Operational Planning (3)
GEOG 673	GIS For Planners (3)
GEOG 681	Environmental Issues (3)
POL 669	Public Policy Analysis (3)
POL 670	Urban Law (3)

#### Required Electives

The remaining coursework will be drawn from other programs across University offerings.

#### Required Thesis or Alternate Plan Paper

ENVR 694	APP (1-2)
ENVR 699	Thesis (3-6)

#### Additional Requirements

A maximum of 9 credits can be taken of ENVR 600- level courses such as, independent study, internship, seminar, in-service, thesis and/or alternate plan paper. All courses must be approved (in advance) by the student's advisor and must be pertinent to the student's career goals. Independent study and internship credits from other programs cannot be used for electives in Environmental Sciences. Fifty percent of the coursework must be at the 600 level (excluding thesis and APP credits).

## COURSE DESCRIPTIONS

### ENVR 540 (3) Environmental Regulations

This lecture course introduces students to major federal environmental statutes, including the Clean Water Act; Clean Air Act; Safe Drinking Water Act; Resource, Conservation and Recovery Act; CERCLA (Superfund); Federal Insecticide, Fungicide and Rodenticide Act; Toxic Substances Control Act; Endangered Species Act; and Food, Drug and Cosmetic Act. In addition, several state of Minnesota environmental statutes will be discussed.  
(F)

### ENVR 550 (3) Environmental Pollution & Control

This is a lecture/lab course focusing on the sources and control of pollutants in air, soil, water, and groundwater. Hazardous waste treatment and the effects of pollutants on human health are also discussed.  
(F)

### ENVR 560 (4) Analysis of Pollutants

This is a lecture/lab class designed to give students "hands-on" experience with design and implementation of research projects coupled with the development of a research proposal. The class research project requires the collection and analysis of data. Quality control and Quality Assurance methods are emphasized.  
(S)

**ENVR 570 (3) Environmental Assessment**

This lecture course introduces students to the National Environmental Policy Act and requirements for Environmental Impact Statements and Environmental Assessment Worksheets at the federal and state level. Phase I Environmental Assessment of land and buildings, an International Perspective on Environmental Assessments, and Economic and Social Impact Assessment are also discussed.

**ENVR 583 (1-2) Seminar**

Each major will present a seminar on his/her research and also have the option to attend semester-long seminars on special topics.

**ENVR 591 (1-2) In-Service****ENVR 619 (2-3) Selected Topics in Environmental Science****ENVR 677 (1-6) Individual Study**

Individual Research Project.  
(F,S)

**ENVR 694 (1-2) Alternate Plan Paper**

(F,S)

**ENVR 698 (1-12) Internship**

Experience in applied Environmental Sciences according to a prearranged training program.

(F,S)

**ENVR 699 (1-6) Thesis**

(F,S)

**ETHNIC AND MULTI-CULTURAL STUDIES MS**

*College of Social & Behavioral Sciences*

*Department of Ethnic Studies*

109 Morris Hall • 507-389-2798

The Department of Ethnic Studies, an interdisciplinary program, is academically committed to promoting multicultural and ethnic knowledge, values, and skills both within and outside the United States and to preparing our students for effective functioning across the culturally diverse and global community. The Ethnic and Multi-Cultural Studies Program (EMCS) with an MS degree is offered to meet the diverse needs of students concerning scholarly academic work, practical application of knowledge and personal growth. Our EMCS graduate program will provide students with multi-ethnic and cross-cultural knowledge, values, and skills from American and global perspectives.

First, students will gain factual knowledge by taking courses focusing on different ethnic, racial, and cultural groups as well as discrimination, immigration, stereotypes, and other important issues. Second, they will learn how to understand and appreciate the different values and beliefs each cultural or ethnic group has. Third and most importantly, students in this program will be expected to gain the following skills - e.g., (a) research skills, writing skills, and/or computer/statistical analysis skills, (b) human resources management and leadership skills, (c) counseling skills, and (d) cultural competency skills or cross-cultural training, and diversity management skills. There is a strong emphasis on competency in applied skills because advocacy must have practical application as its foundation to be credible.

**Admission requirements**

1. An undergraduate GPA of at least 3.0 on a 4.0 scale;
2. A baccalaureate degree from an accredited college or university;
3. At least 9 credits in ethnic and cross-cultural areas. This requirement may be waived if the applicant can show relevant work (related to other social sciences) or other experiences that provide the necessary background to pursue graduate work in EMCS;
4. Have knowledge of or skills in two languages (i.e., English plus preliminary level of another language - i.e., six credits of undergraduate language courses), but this may be subject to arrangement and discussion between the applicant and the Department; and
5. When students do not meet the normal admission requirements, they may be recommended for admission by the department subject to removal of deficiencies or other conditions.

**ETHNIC AND MULTI-CULTURAL STUDIES MS**

Thesis Plan - 33 credits

Alternate Plan Paper - 34 credits

**Required Core from the following (15 credits, 12 credits must be 600 level)**

ETHN 500	Cultural Pluralism (3) OR
ETHN 510	Foundation of Oppression (3)
ETHN 502	Ethnic Research Method/Skills (3) OR
ETHN 501	Applied Cultural Research (3) OR
ANTH 531	Applied Cultural Research (3)
ETHN 603	Seminar in Ethnic/Cross-Cultural Studies (3) OR
ANTH 603	Seminar in Applied Anthropology (3)
ETHN 650	Helping Across Culture (3) OR
CSP 648	Counseling in a Multicultural Society (3)
ETHN 660	Cross-Cultural Training and Diversity Management (3)
ETHN 695	Ethnic-Race Implications (3)
ETHN 697	Internship (1-6)

**Required supporting core (9 credits) - one course from each of three groups. Two courses must be on the 600 level\*****Group 1.** Choosing one of the following research courses

ANTH 602	Seminar in Research Method (3)
POL 600	Research Method (3)
PSY 610	Research Design and Statistics (4) OR
GEOG 576	Spatial Statistics (3)*
SOC 605	Seminar in Sociological Research (3)
WOST 620	Feminist Research (3)

**Group 2.** Choosing one of the following HR management/leadership courses

EDAD 644-03	Seminar on leadership studies (3) OR
EDAD 668	Human Resources Management (2) plus
EDAD 669	Human Resources Topics (1)
POL 662	Human Resources Management (3)
PSY 563	Survey of Industrial/Organizational Psychology (4)*
URSI 650	Urban Administration Services (3)

**Group 3.** Choosing one of the following counseling courses:

CSP 665	Counseling Theories (3) OR
CSP 571	Interpersonal Helping Skills (3)* OR
CSP 618	Introduction to Professional Community Counseling (3)
REHB 640	Theories in Rehabilitation (3) OR
REHB 651	Rehabilitation Counseling Techniques (3)
PSY 683	Behavioral Assessment (4)

**Required Electives (6-9 credits)**

ETHN 520	African American Studies (3)
ETHN 530	American Indian Studies (3)
ETHN 540	Asian American Studies (3)
ETHN 550	Latino/Hispanic Studies (3)
ETHN 560	Urban Minority Problems (3)
ETHN 570	Women of Color (3)
ETHN 580	Social Justice in Ethnicities and Gender (3)
ETHN 586	Racial and Ethnic Politics (3)
ETHN 590	Racial/Ethnic Families in the U.S. (3)
ETHN 595	Selected Topics (3)
ETHN 630	Liberation Theory (3)
ETHN 640	Environmental Justice (3)
ETHN 677	Individual Studies (3)*

**Required Written Comprehensive and Oral Exam plus thesis or APP**

ETHN 698	Alternate Plan Paper (1-2)
ETHN 699	Thesis (3-6)

\*At least 18 credits (or 6 courses) must be 600 level, excluding APP or thesis. Students are allowed to take only ONE 500 level as part of their supporting cores in Part II. If they take a 500 level (see\*) in Part II as a supporting core in part II, students must take ETHN 677 - Individual Studies (see \*) in their required electives in Part III.

**Graduate Diversity Certificate: Training in Cultural Diversity**

Required course (3)	
ETHN 650	Helping Across Culture (3) (or CSP 648 Counseling in a Multicultural Society with department permission only)

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## ETHNIC AND MULTI-CULTURAL STUDIES

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ETHN 660 Cross-Cultural Training & Diversity Management (3)

If one of the above noted courses is selected as a required course, the other can be used as an elective in B below.

### **Ethnic Diversity Electives (9): Select any nine credits (3 courses) from the following:**

ETHN 500 Cultural Pluralism (3)  
(or ETHN 510 – Foundations of Oppression)

ETHN 502 Ethnic Research Method/Skills (3)  
(or ETHN 501/ANTH 532 – Applied Cultural Research)

ETHN 520 African American Studies (3)

ETHN 530 American Indian Studies (3)

ETHN 540 Asian American Studies (3)

ETHN 550 Latino/Hispanic Studies (3)

ETHN 560 Urban Minorities Problems (3)

ETHN 581 U.S. Civil Rights since 1965 (3)

ETHN 595 Selected Topics (3) **OR**

ETHN 596 Workshop (1-3)

ETHN 603 Seminar in Ethnic and Cross-Cultural Studies

ETHN 630 Liberation Theory (3)

ETHN 640 Environmental Justice (3)

ETHN 695 Ethnic-Race Implications (3)

ETHN 696 Individual Studies (3)

or a similar graduate course that is approved by the Department

### **Other diversity electives (6)**

Two courses (or 6 credits) from the following (that must be in different categories)

#### **1. Category of Gender and Sexuality**

ETHN 570 Women of Color (3) **OR**

ETHN 580 Social Justice in Ethnicities and Gender (3) **OR**

WOST 555 Women, Sex, and Identity (3) **OR**

WOST 600 Collective Action (3) **OR**

WOST 640 Feminist theories (3) **OR**  
a graduate course related to Women's Issues but to be approved by the Department.

#### **2. Category of Age and Gerontology**

GERO 580 Topics in Gerontology: Aging, diversity and elder services (3)  
or a graduate course related to Aging but to be approved by the Department.

#### **3. Category of Disability**

REHB 619 Psychosocial Aspects of Disability  
or a graduate course related to disability but to be approved by the Department.

#### **4. Category of Other Human Diversity**

A similar graduate course which must be related to other human diversity but to be approved by the Department. Diversity is an evolving concept that must change over time.

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## COURSE DESCRIPTIONS

### **ETHN 500 (3) Cultural Pluralism**

This course will examine issues confronted in a multicultural society. It will study ethnic/minority groups not usually included in mainstream society, including their uniqueness and harmonious co-existence with other ethnic groups.  
(F, S)

### **ETHN 501 (3) Applied Cultural Research**

This course introduces concepts and methods of applying socio-cultural understanding to contemporary problems to bring about the empowerment of affected people. Case/field studies and other research methods in social sciences will be used to illustrate the impact and problems of culture change with special attention to its affect on disadvantaged groups of people. Students will also design their own applied projects.  
Prerequisite: ANTH 101, 103, or 230 or consent;  
ETHN 100, 101, or 150 or consent

### **ETHN 502 (3) Ethnic Research Methods/Skills**

This course details with scientific methods and investigative skills in Ethnic Studies. From an interdisciplinary perspective, students are expected to learn how to do research on ethnic and cross-cultural issues (e.g., hypothesis, different methods, data collection/analysis, and report writing). Other professional skills/issues are also discussed.

### **ETHN 503 (3) Chicana Feminisms**

This course examines the different forms of Chicana Feminisms produced by Chicana scholars and activists. It demonstrates how Chicana Feminisms challenge social inequalities, and focuses on the construction of Chicana identities regarding the intersections of gender, race/ethnicity, sexuality and culture.

### **ETHN 510 (3) Foundations of Oppression**

Students will examine the forces which create and maintain prejudice, discrimination, and racism. Special attention will be given to the work of Paulo Freire.  
(F) Prerequisite: ETHN 500 or consent

### **ETHN 520 (3) African American Studies**

This course examines contemporary topics in the lives of African Americans. These topics include but are not limited to: slavery, Reconstruction, Post-Reconstruction, Separate-But-Equal, Desegregation, and Resegregation.  
(S) Prerequisite: ETHN 500 or consent

### **ETHN 530 (3) American Indian Studies**

This course will provide multiple perspectives about the issues facing American Indian peoples today. Topics to be considered are education, health care, gender, land rights, religious freedom, cultural identity, natural resource management, law enforcement, economic development, self-determination, and mass media images.  
Prerequisite: ETHN 500 or consent

### **ETHN 540 (3) Asian American Studies**

Examination of current issues affecting the status of Asian Americans. The focus of this course will vary to reflect students' interests in the area of politics, education, economics, social and/or cultural dealing with Asian Americans.  
Prerequisite: ETHN 500 or consent

### **ETHN 550 (3) Latino/Hispanic Studies**

Thematic examination of major issues surrounding Latino/Hispanic communities in the United States. Emphasis will be on education, labor, politics, social welfare, and migration.  
Prerequisite: ETHN 500 or consent

### **ETHN 560 (3) Urban Minority Problems**

This course is concerned with racial/ethnic minorities who live in large urban (inner city) areas. It is especially concerned with the roles that culture and discrimination play in the shaping of America's ghettos, barrios, reservations, and Chinatowns.  
(S)

### **ETHN 570 (3) Women of Color**

Examines the effects of sexism and racism on women of color and provides an understanding of the significant contributions they have made in their struggles against oppression.  
(S)

### **ETHN 580 (3) Social Justice in Ethnicity and Gender**

Survey of institutional sexism and racism including their impact on U.S. society. Special attention will be given to their interconnectedness.  
(F)

### **ETHN 586 (3) Racial and Ethnic Politics**

The course examines racial and ethnic minorities and the mutual influences between these groups and the structures, procedures, and issues of U.S. politics. Major topics include: public opinion on racial issues, the representation of minorities in elective and appointive offices, and the nature of value conflicts underlying contemporary racial issues, including affirmative action, immigration, welfare, language policies, and Native American tribal issues.

### **ETHN 590 (3) Racial/Ethnic Families in the U.S.**

This course will examine different definitions of "family" through time in the U.S. It will focus on changes in the African-, Native-, Hispanic/Latino-, and Asian-American families. It will also compare and contrast differences and similarities among ethnic minority families as well as between them and white ethnic families.

**ETHN 595 (3) Selected Topics**

Multiple perspectives on the selected topic(s) will be addressed. Student scholars may contribute to the selection and/or refinement of the topic(s).

Prerequisite: ETHN major

**ETHN 596 (1-3) Workshop**

**ETHN 598 (1-6) College Teaching Internship**

Students assist a faculty member in teaching an Ethnic Studies 100 or 101.

**ETHN 603 (3) Seminar in Ethnic/Cross-Cultural Studies**

This course focuses on ethnic/cross-cultural field development, professional ethics/values, skills compoment and practice, including such guidelines as preparations for resumes and curriculum vitae, research proposals, formal (oral) presentation, grant proposals, thesis plans, articles and books.

**ETHN 630 (3) Liberation Theory**

This course examines the writings of various authors to gain a theoretical perspective of such issues as racism, sexism and oppression, and how these authors have formulated a plan for change in the U.S. and in the world.

**ETHN 640 (3) Seminar on Environmental Justice**

This examines the relevant issues surrounding environmental justice, with a particular emphasis on political ecology, resource colonialism, environmental racism, applied ethnic studies, and local environmental movements and minority advocacy and focuses on professional application and advocacy through practice.

**ETHN 650 (3) Helping Across Cultures**

Scholars preparing for and/or working in the helping professions or related careers will address the issues and experiences of culturally different persons. Special attention will be given to preparation for effective cross-cultural interactions.

(S) Prerequisite: ETHN 500 or consent

**ETHN 660 (3) Cross-Cultural Training and Diversity Management**

This course is designed for those students or professionals who prepare for and/or work in the diverse organizations/institutions, corporations, communities in and outside America. Theories, techniques and skills for cross-cultural training/consultation and diversity management are covered.

**ETHN 677 (1-3) Individual Study**

Specialized independent study and research.

(F,S) Prerequisite: one 500 level ETHN course

**ETHN 695 (3) Ethnic-Race Implications**

Graduate scholars will address the meaning and significance of US race and ethnicity within global perspectives. Special attention will be given to the writings of scholars of color.

(F) Prerequisite: ETHN 500 or consent

**ETHN 697 (1-10) Internship**

Supervised experience to which the theories and methodologies of ethnic studies can be applied. Opportunities may be on-campus and/or off-campus, including work in other countries.

(F,S) Prerequisite: Two 500/600 level ETHN courses

**ETHN 698 (1-2) Alternate Plan Paper**

Concluding research project. May largely use secondary sources.

(F,S)

**ETHN 699 (3-6) Thesis**

Concluding research project. Requires toward original research.

(F,S)

**EXPERIENTIAL EDUCATION MS**

*College of Education*

*Department of Educational Leadership*

115 Armstrong Hall • 507-389-1116

Web site: <http://ed.mnsu.edu/edleadership/>

See EDUCATIONAL LEADERSHIP

**FAMILY CONSUMER SCIENCE**

*College of Allied Health & Nursing*

*Department of Family Consumer Science*

*B102 Wiecking Center • 507-389-2421*

The Department of Family Consumer Science (FCS) does not currently offer a master's degree in FCS. However, the department does offer a variety of graduate-level courses which may be taken to complete dietetics requirements, or as electives in other graduate programs.

Students may also work with an FCS advisor to complete a Master of Science degree in Cross-disciplinary Studies with a concentration in FCS or a specific FCS content area: FCS Education, Family Life and Child Development, or Food and Nutrition. For further information please see section on Cross-disciplinary Studies MS.

COURSE DESCRIPTIONS

**FCS 500 (3) Culturally Diverse Family Systems**

An analysis of culturally diverse family systems in America; emphasis on relationships within the family and with the larger community across the family life cycle.

F

**FCS 501 (3) Family Life Development**

The course is a study of development through the family life cycle. Emphasis on developmental interaction and family systems concepts.

S

**FCS 508 (3) Family Life Dynamics**

See Sociology 508.

**FCS 515 (1-2) Student Organization**

The teacher-coordinator's role as a vocational club advisor.

**FCS 520 (3) Nutrition Assessment**

In-depth study and practice of nutrition assessment techniques. Students will use findings to determine nutritional needs and make nutritional diagnoses.

**FCS 536 (3) Historic Costume**

**FCS 537 (1-3) Topic: Textiles/Clothing**

Topics of current interest. May be repeated. Demand

**FCS 539 (3) Nutrition for Physical Activity and Sport**

This course provides in-depth exploration of the dietary needs of physically active individuals across the lifespan. Its laboratory component will focus on performance and interpretation of assessments commonly used to determine dietary and physiological status.

Pre: FCS 140 or 240 F,S

**FCS 540 (3) Nutrition II**

An advanced nutrition course in the function and interaction of nutrients in metabolic processes. Contains a nutrition research component and research case study, focusing on metabolism in persons selected by the student.

**FCS 542 (3) Clinical Dietetics I**

The role and influence of dietetics in society, nutritional assessment and care plans, dietetic principles applied to normal and malnourished states. Case-based approach.

F Prerequisite: FCS 440

**FCS 544 (3) Experimental Food Science**

Food quality, safety, formulation, processing, preservation, and biotechnology are explored. Original food science experiments are planned, executed, interpreted, and presented using appropriate scientific techniques.

S Prerequisite: FCS 340, HLTH 475 (or STAT 154)

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## FAMILY CONSUMER SCIENCE

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### FCS 545 (2) Food Preservation

Principles of an laboratory experience in food preservation by drying, freezing, canning, pickling and jelly making.

V

### FCS 546 (3) Lifespan Nutrition

Study of nutritional needs of pregnancy, infancy, childhood, and adulthood. Experience in group dynamics in providing nutritional education to a target population.

F Prerequisite: FCS 140 or 240 or consent

### FCS 548 (3) Clinical Dietetics II

The pathophysiological, nutrient assessment, planning, and counseling aspects of gastroenterological pulmonary, surgical, endocrine, cardiovascular, and renal conditions. Case-based approach.

S Prerequisite: FCS 442

### FCS 551 (2) Integrating Service Values Into Practice

### FCS 552 (3) Integrating Foodservice Software Into Practice

### FCS 554 (3) Sensory Evaluation and Food Product Development

Principles of sensory evaluation and application of those principles and others in food sciences by selecting, planning, conducting, and reporting on a food product development project.

### FCS 572 (2) Residential Management

An in-depth exploration into planning and managing a variety of residential property facilities. Specifically addresses employment as a manager of such properties.

V Prerequisite: FCS 270, 370

### FCS 574 (4) Residential Management for Families and Special Needs

The system approach to analyzing family situations to make decisions and correlate resources in the resolution of family managerial problems. Emphasis on the application of managerial skills to lifestyle situations: young-families, elderly, special needs, singles, and low income.

S

### FCS 575 (2) Family Policy

Family related issues affected by government policies and other regulatory practices; legislation involving incentives, financing, subsidies, etc. The role of related public and management issues.

S

### FCS 578 (2) Family Finance

Introduce students to the how's and why's of family financial management to reduce mistakes made in successfully managing financial aspects of life. For non-business majors.

V

### FCS 582 (2) Teaching Family Life/Parenting Education

Analyze issues and concerns related to family life education. Investigate teaching strategies and methods of evaluation. Preparation and implementation of appropriate lesson plans. Emphasis placed on active learning strategy.

F

### FCS 583 (2) Adult Education in FCS

Philosophy and objectives of adult education in family consumer sciences with emphasis on structure of adult education, informal teaching-learning environments; procedures for planning and developing programs; and teaching experiences with the adult learner.

F (every year), S (even-numbered years)

### FCS 587 (1-3) Topic: Family Consumer Science Education

Current issues and/or research findings to be announced as offered. May be repeated.

V

### FCS 588 (3) Parenting Education

A systems perspective on parent-child relationship. This course covers parent-child issues during the stages of human development. It also focuses on special needs children and families, cross-cultural issues, and family violence. Emphasis is on research and theory and parenting education strategies.

F

### FCS 590 (1-3) Workshop

Workshop topics vary as announced in class schedule. May be repeated.

V

### FCS 595 (3-4) Intern: Early Child Family

A scheduled work assignment that will include on-site experiences with parents in early childhood family education.

D Prerequisite: consent

### FCS 596 (2-3) Selected Topics: FLCD

Topics announced as offered. May be repeated.

V

### FCS 597 (1-6) Internship

A scheduled work assignment with supervision in private business, industry, and government agency appropriate to each area of concentration.

D Prerequisite: consent

### FCS 598 (1-6) Internship

A scheduled work assignment with supervision in private business, industry, and government agency appropriate to each area of concentration.

D Prerequisite: consent

### FCS 600 (3) Issues Family Relationships

This course provides a graduate-level foundation in family science. It covers a broad range of family issues within a theoretical framework. Suitable for all graduate students who plan to work with families in human sciences or education.

V

### FCS 616 (2) Child Development Issues in Family

Integration of child development issues within the context of home and family with emphasis on analysis of research and application of concepts.

V

### FCS 675 (2) Consumer Education

Knowledge about consumer economics which will help create positive changes in the marketplace. Emphasis is placed on teaching consumer information techniques in schools, buying skills, money management, and consumer citizenship responsibilities.

V

### FCS 677 (1-4) Individual Study

Opportunity for independent study with guidance of graduate faculty.

### FCS 680 (1-3) Methods & Evaluation of Family Consumer Science

Recent trends in methods and evaluation based on research and experimental programs with application to the educational environment including vocational education programs.

V

### FCS 681 (1-3) Family Consumer Science Curriculum

Analysis of curriculum trends in family consumer science programs including vocational education programs. Application of curriculum development principles.

V

### FCS 683 (2) Seminar: Adult Education

Understanding and facilitating adult learning in the Family Consumer Science discipline.

V

### FCS 686 (1-3) Trends in Family Consumer Science

Examine current issues and identify trends in the content area of family consumer science. May be repeated.

V

### FCS 691 (1-4) In-Service

In-service courses are those courses designed to upgrade qualifications of individuals in their professional endeavors. May be repeated.

V

### FCS 692 (2) Seminar: Research

Fundamentals of research design, data collection method, and research strategies related to Family Consumer Science discipline.

V Prerequisite: a statistical course

FCS 694 (1-2) Alternate Plan Paper

FCS 698 (1-5) Internship

FCS 699 (3-6) Thesis

## FRENCH MS

### FRENCH EDUCATION MS (DISCIPLINE-BASED)

*College of Arts & Humanities*  
*Department of Modern Languages*  
227 Armstrong Hall • 507-389-2116

Modern Language graduate study at Minnesota State University, Mankato enables students to pursue the Master of Science in French (Secondary Teaching) or the Master of Science Community College Track in French. The Department of Modern Languages also offers graduate courses in French for the Master of Arts in Teaching (MAT in French) degree. The MAT program is designed for those who want to teach at the secondary level but lack certification. The Modern Language courses associated with the MAT degree are also listed below.

**Admission.** Complete the general admission requirements of the College of Graduate Studies and Research. Applicants must possess French oral proficiency at a level of advanced low on the ACTFL proficiency scale or equivalent (contact department for information). A writing sample in French, a personal statement in English summarizing experiences and professional goals that apply to the MS degree in French, and two letters of recommendation, one from an undergraduate instructor or academic advisor should be forwarded to the Department Chair.

**Graduate Assistantships.** A number of graduate teaching assistantships are available during the academic year. A graduate assistant in the Department of Modern Languages teaches classes in elementary French, German, Spanish, or ESL and receives a salary. For more information, contact the College of Graduate Studies and Research or the Department of Modern Languages.

**Graduate Study Abroad.** Graduate credit can be earned in French on department-sponsored Study Abroad Programs conducted at institutions in France. For more information, consult the Department of Modern Languages.

## FRENCH MS

### *Community College Option*

(Thesis Plan - 30 credits)  
(Alternate Plan Paper -34 credits)

Students interested in teaching at the Community College level should see their advisor about identifying methods courses to strengthen their teaching ability. Licensure is not required to teach at the Community College level, but courses in teaching skills are recommended. This program prepares students of French for teaching in higher education. Fifty percent of the credits must be taken at the 600 level, excluding thesis or APP credits.

#### **Required Major Teaching Field (16-22 credits)**

Choose any 500/600 level French courses selected in consultation with an advisor.

#### **Required Modern Language Methods (3 credits)**

MODL 560 – Methods of Teaching Modern Languages, unless an equivalent course was taken at the undergraduate level.

#### **Required Professional Education credits (6 credits)**

Choose any 500/600 level Professional Education courses selected in consultation with an advisor.

#### **Required Electives (2-6 credits)**

Choose any 500/600 level elective courses selected in consultation with an advisor.

### **Required Thesis or Alternate Plan Paper**

FREN 694 Alternate Plan Paper (1 or 1-2)  
FREN 699 Thesis (3 or 3-4)

### **FRENCH EDUCATION MS (Discipline-Based)**

(Thesis Plan - 30 credits)  
(Alternate Plan Paper - 34 credits)

This degree does not lead to teacher licensure. Students who desire licensure should consult the Master of Arts in Teaching (MAT) program. Emphasis in French is available.

This program is primarily for teachers of French who are interested in pursuing an advanced degree in the language and in increasing their proficiency. The degree requires courses totaling 30 credits (with thesis) or 34 credits (with alternate plan paper). Fifty percent (50%) of the credits must be taken at the 600 level (excluding thesis and APP credits).

#### **Required French (18-22 credits)**

Choose any 500/600 level French courses selected in consultation with an advisor.

#### **Required Professional Education (6 credits)**

Choose any 500/600 level Professional Education courses selected in consultation with an advisor.

#### **Required Electives (6 credits)**

Choose any 500/600 level elective courses selected in consultation with an advisor.

### **Required Thesis or Alternate Plan Paper**

FREN 694 Alternate Plan Paper (1 or 1-2)  
FREN 699 Thesis (3 or 3-4)

## COURSE DESCRIPTIONS

### FRENCH

#### **FREN 502 (3-4) French Civilization**

A survey of the historical, philosophical, literary, and artistic development of France from the beginning to the present.

Prerequisite: undergraduate French major

#### **FREN 504 (2-4) French Syntax**

Systematic review of French grammar.

Prerequisite: undergraduate French major

#### **FREN 505 (2-4) Business French I**

Study of current vocabulary, terminology, and practices used in the business world. Study of developments affecting the French business, industrial, and agricultural communities.

Prerequisite: undergraduate French major

#### **FREN 506 (2-4) Business French II**

Study of France's position in the European Economic Community and of the development of French business law with an emphasis on the obligations and rights of business people, the classification and organization of the various types of companies, the emission of contracts, and other documents.

Prerequisite: undergraduate French major

#### **FREN 515 (1-3) Composition**

Practice in descriptive, narrative, and expository writing. Acquisition of vocabulary and advanced grammatical structures.

Prerequisite: undergraduate French major

#### **FREN 516 (1-4) Conversation**

Practice in advanced conversational skills.

Prerequisite: undergraduate French major

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## FRENCH

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### FREN 517 (1-3) Modern France

In-depth study of different aspects of contemporary French civilization.  
Prerequisite: undergraduate French major

### FREN 520 (1-4) French Seminar

In-depth study of an author, genre, movement, theme, or period.  
Prerequisite: undergraduate French major

### FREN 532 (1-4) French Literature I

Study of the major authors, works, and movements of two successive centuries of French literature.

Prerequisite: undergraduate French major

### FREN 542 (1-4) French Literature II

Study of the major authors, works, and movements of two successive centuries of French literature.

Prerequisite: undergraduate French major

### FREN 552 (1-4) French Literature III

Study of the major authors, works, and movements of two successive centuries of French literature.

Prerequisite: undergraduate French major

### FREN 594 (1-6) Supervised Study in French-Speaking Countries

Topics will vary. Study for credit must be approved by the department prior to departure.

Prerequisite: undergraduate French major

### FREN 597 (1-6) Internship

Prerequisite: undergraduate French major

### FREN 614 (1-3) Paris Et L'Île De France

Visits to the major churches, cathedrals, castles, monuments, museums, and neighborhoods in and around Paris.

Prerequisite: undergraduate degree in French

### FREN 660 (2) Research Methods: French

Methods and tools of literary research.

Prerequisite: undergraduate degree in French

### FREN 677 (1-4) Individual Study

Topics will vary.

Prerequisite: undergraduate degree in French

### FREN 680 (1-3) Topics in French Literature

Topics will vary. May be repeated.

Prerequisite: undergraduate degree in French

### FREN 681 (1-3) Topics in French Culture & Civilization

Topics will vary. May be repeated.

Prerequisite: undergraduate degree in French

### FREN 682 (1-3) Topics in French Language Study

Topics will vary. May be repeated.

Prerequisite: undergraduate degree in French

### FREN 693 (1-6) Supervised Study in a French-Speaking Country

Topics will vary. Study for credit must be approved by the department prior to departure.

Prerequisite: undergraduate degree in French

### FREN 694 (1) Alternate Plan Paper

Prerequisite: undergraduate degree in French

### FREN 697 (1-6) Internship: Community College Option

### FREN 699 (3-6) Thesis

Prerequisite: undergraduate degree in French

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## MODERN LANGUAGE

### MODL 560 (3) Methods of Teaching Modern Languages

This course is intended to provide prospective secondary school teachers and teachers of modern languages with experience and background to prepare them for teaching modern languages to secondary school children. The course meets state licensure requirements. Major topics include: Second language acquisition and child language development; comprehension-based teaching strategies; standards-based curriculum development and planning; integrating modern languages with the secondary school curriculum; subject content instruction; and teaching and assessing listening, speaking, reading and writing skills. Pre: Student must demonstrate oral proficiency level of Intermediate-High on ACTFL scale or equivalent in target language. Contact the department for additional details.

### MODL 561 (1) Applied Modern Language Teaching Methods

A field experience in a secondary school setting for students earning licensure in modern language teaching. Practicum students work with middle or high school students of French, German, or Spanish. Take concurrently with or following MODL 460.

### MODL 562 (3) Foreign Languages in the Elementary School (FLES) Methods

Introduction to theory and practice of modern language teaching for children grades K-6, including oral language development, second language literacy development, content-based language instruction, and techniques for language immersion programs. The course meets state licensure requirements.

Prerequisite: Student must demonstrate oral proficiency level of Intermediate-mid on ACTFL scale or equivalent in target language. Contact the department for additional details.

### MODL 563 (1) Applied FLES Methods

A field experience in an elementary setting for students earning licensure in modern language teaching. Practicum students work with elementary school students in French, German, or Spanish. Take concurrently with or following MODL 462.

### MODL 565 (1-3) Workshop in Modern Language Education

Topics in modern language education. May be repeated for credit.

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## GEOGRAPHY MS

### CERTIFICATE IN GEOGRAPHIC INFORMATION SCIENCES

*College of Social & Behavioral Sciences*

*Department of Geography*

7 Armstrong Hall • 507-389-2617

Geography, as taught at Minnesota State University, Mankato, deals with phenomena in earth space and their areal extent, intensity and variation. Graduate programs in geography are designed to help students develop advanced skills in research design and analysis, as well as competence in using specific tools of geographic inquiry. In addition, the department provides necessary continuing education for a variety of elementary, high school and post-secondary teachers and other professionals, such as planners.

Geography graduate study emphasizes knowledge and understanding of environments and processes derived from the basic structure of Earth, as well as the cultural attributes and diversity of its peoples. Geography also examines links among economies, cultures and intellectual models that attempt to explain perceptions of Earth, along with the geographer's concepts and strategies for analyzing these interconnections.

In addition to a diverse and experienced faculty, the department supports its own reference collection of books, periodicals and maps. The department maintains a fully equipped cartography laboratory, including computer-assisted cartography software and equipment. The department supports a geographical analysis laboratory in which students have access to GIS software and Windows-based computers along with appropriate peripheral equipment. GPS software and equipment are also available.

Minnesota State Mankato's Weather Analysis Laboratory for Teaching and Educational Resources (WALTER) is an independent unit equipped with state-of-the-science weather observation and display equipment. Two satellite dishes feed multiple data streams to a console of computers using VISTA, Storm-Sentry and Storm-Pro (from DTN-Kovouras), Satellite imagery (from NVG), data analysis programs like

LEADS (from IPS) and the EWB visualization program (from SSESCO). A time-lapse Sky-Cam and local observational instruments complete the total weather picture available. The facility provides one of the best teaching/learning environments in the Midwest and supports the suite of courses offered in Atmospheric Sciences. The University library holds many of the major U.S. geographical journals. The library's map and atlas holdings are formally organized in its Map Collection, which is a depository for maps produced by federal government agencies including (but not limited to) the U.S. Geological Survey, the Defense Mapping Agency, and the U.S. Department of Agriculture (including the Forest Service).

**Admission.** Applicants for admission to graduate programs in geography must have maintained a grade point average of 3.0 on a 4.0 scale for a four-year degree. Applicants should submit a letter of intent, official transcripts from all universities previously attended, and letters of recommendation from three individuals familiar with the applicant's undergraduate academic performance in order to be considered for the program. Applicants having grade point averages below the minimum who present convincing evidence of potential for success may be considered for provisional admission.

**Financial Assistance.** Some graduate assistantships are available through the Department of Geography. Most are funded directly from the College of Graduate Studies and Research and the College of Social and Behavioral Sciences. Typically assistantships carry an obligation of ten through twenty hours per week. Further information about the availability of assistantships and about the status of applications for assistantships should be sought from the department chair.

## GEOGRAPHY MS

(Thesis Plan - 30 credits)  
(Alternate Plan Paper - 34 credits)

### Required Core and Research (6 credits)

GEOG 678 Geographic Research & Writing (3)  
GEOG 680 Philosophy of Geography (3)

### Required Electives (24-26 credits)

Choose any 500/600 level elective courses in consultation with an advisor. Fifteen credits must be taken in Geography.

### Required Thesis or Alternate Plan Paper

GEOG 694 Alternate Plan Paper or Internship (1-2)  
GEOG 699 Thesis (3-6)

## GEOGRAPHY EDUCATION MS

(Discipline-Based)  
(Thesis Plan - 30 credits)  
(Alternate Plan Paper - 34 credits)

Teaching licensure is a prerequisite to pursuing this degree which is for teachers interested in enrichment in a teaching area. This degree does not lead to initial teaching licensure. Students who desire initial licensure should consult the Master of Arts in Teaching (MAT) program. Please see the section concerning the MAT program that is listed in this bulletin.

### Required Geography (3 credits)

GEOG 680 Philosophy of Geography (3)

### Required Professional Education (6 credits)

KSP 640 Assessment and Evaluation (3)  
KSP 675 Curriculum Appraisal (3)

### Required Education outside Geography and Professional Education (6 credits)

Choose any 500/600 level Education courses taken in disciplines outside Geography and Educational Studies: K-12 and Secondary Programs in consultation with an advisor.

### Required Geography Electives (9-11 credits)

Choose any 500/600 level Geography elective courses in consultation with an advisor. A minimum of 6 credits need to be taken in a specialized geography area (e.g. physical geography).

### Required Electives (4-7 credits)

Choose any 500/600 level elective courses in consultation with an advisor

### Required Thesis or Alternate Plan Paper

GEOG 694 Alternate Plan Paper (1-2)  
GEOG 699 Thesis (3-6)

## CERTIFICATE IN GEOGRAPHIC INFORMATION SCIENCES (GISc)

(18-20 credits)

Students will receive a fundamental knowledge and understanding of Geographic Information Systems (GIS) and Remote Sensing technologies with the option to focus more intensively on advanced GIS, Remote Sensing or Global Positioning Systems (GPS) principles and applications.

### Core courses (12 credits)

GEOG 573 Intermediate GIS (4)  
GEOG 574 Introduction to Remote Sensing (4)  
GEOG 670 Issues in Geographic Techniques (4)

### Students must also select 2 from the following:

GEOG 539 Transportation (4)  
GEOG 571 Digital Field Mapping with GP (4)  
GEOG 575 Advanced Remote Sensing (4)  
GEOG 576 Spatial Statistics (3)  
GEOG 578 Spatial Analysis (3)  
GEOG 579 GIS Practicum (4)  
GEOG 580 Environmental Hazards (3)

## COURSE DESCRIPTIONS

### GEOG 509 (1-4) Selected Topics

The instructor will develop a specific course on a geographic topic, such as soils, landforms, water resources, energy, housing, population geography, or some other topic for the class.

### GEOG 510 (3) Climatic Environments

A qualitative regional climatology of the world, including the Pleistocene Ice Ages and urban impacts upon climate. Emphasis is on the characteristics of particular climates and understanding the factors that control their spatial distribution.

Prerequisite: GEOG 101 or con

### GEOG 512 (4) Advanced Weather

Meteorological principles and theory are applied to the analysis and interpretation of weather data in order to better understand the structure and evolution of synoptic-scale weather systems. Basic knowledge of mathematics will be assumed.

Prerequisite: GEOG 317

### GEOG 514 (3) Biogeography

This course involves the global distribution of plants and animals, with emphasis on natural and human induced causes of this distribution. The role of humans in the endangerment and extinction of species and conservation of vital habitats are also discussed.

### GEOG 520 (3) Conservation of Natural Resources

Survey of natural resources emphasizing energy, metallic, fisheries, and water resources. Also addresses timber, wetlands, and wildlife on public and private lands.

### GEOG 525 (3) Economic Geography

Examines national and international economic geographical order and trade activities. Topics include economic development, competition, and impacts on the environment and people

### GEOG 530 (3) Historical Geography: The U.S.

The evolving patterns of settlement, cultures, landscapes, and economies of the United States from the colonial period to 1990. An introduction to historical geography as a sub field of geography, including career opportunities in related professions.

### GEOG 535 (3) Urban Geography

Hypotheses and generalization related to urban functions, structure, land use, distribution, growth, and decline. Emphasis will be mostly on the United States' urban places

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## GEOGRAPHY

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### **GEOG 536 (2) Rural Development**

Introduction to theoretical frameworks for analyzing processes of economic, environmental, and social change in rural regions. Includes basic and advanced geographical principles and techniques for studying non-urban areas. Designed to equip students with the knowledge and skills necessary for carving out research projects on rural environments.

### **GEOG 537 (3) Political Geography**

Spatial problems and structure of governments, focusing on countries of the world. Covers such topics as boundary problems, strategic locations, and geopolitical explanations of international relations and conflict.

### **GEOG 538 (3) Social Geography**

Concepts and theories concerning global and national social problems and the significance of geographic analytic methods for social research. Study of factors related to variations in regional standards of living.

### **GEOG 539 (4) Transportation Geography**

Four major sets of ideas will be covered: Introduction to spatial organization, network analysis, allocation methods, and urban transportation. The emphasis is on these approaches to understanding the geographic of transport by description, explanation, and normative or optimal methods.

### **GEOG 540 (1-4) Field Studies**

Various excursions to study physical and cultural landscapes inside and outside Minnesota.

### **GEOG 545 (3) Latin America**

Regional geography covering the ecological and human environment of Central and South America and the Caribbean. Students can pick specific topics to study in detail. The geographic relations between the USA and Latin America are also covered.

### **GEOG 546 (3) Canada**

Students will develop a knowledge of the environmental, cultural, historical, and economic geographies of Canada. Readings of best-selling fiction and scholarly works written by Canadians will provide a Canadian perspective on the nation's past, present, and future.

### **GEOG 550 (3) Europe**

Cultural, environmental, and economic background of Europe west of the former USSR. Following a general geographic survey, the course will cover major regions and countries.

### **GEOG 554 (3) Russian Realm**

Survey of the area of the former Soviet Union. Examines regional patterns of the physical environment, natural resources, population distribution, cities, and economic activity. Relates people to the land.

### **GEOG 556 (3) Africa**

A survey of the physical and cultural resources and economic development of the continent with emphasis on current problems. Topics discussed will focus on Africa south of the Sahara.

Prerequisite: Jr. or Sr. status

### **GEOG 558 (3) Geography of East Asia**

Examines the physical and human environments of eastern Asia, mainly China, Korea, and Japan. The class will be assisted by visual sources and hands-on use of primary documents.

### **GEOG 564 (4) Teaching Earth Science**

An applied course tailored to meet practical needs of a teacher, related to curriculum development and earth science lab equipment and supplies.

### **GEOG 571 (4) Digital Field Mapping with GP**

This course will cover basic strategies for conducting field surveys and gathering from the real world data appropriate to mapping the earth's surface. Emphasis will be upon simple but reliable techniques, ranging from compass-and-pacing to global positioning systems (GPS).

Prerequisite: GEOG 101 or 470/570

### **GEOG 573 (4) Intermediate GIS**

Comprehensive examination of GIS for manipulation and analysis of spatially-

referenced data, including data structure and organization, input and output problems, data management, and strategies for analytical work.

Prerequisite: GEOG 373

### **GEOG 574 (4) Introduction to Remote Sensing**

This is an introductory course on theories and techniques of remote sensing. Focus will be placed on providing students with a general overview of the application of remote sensing to practical problems and hands-on experience for image processing and analysis.

### **GEOG 575 (4) Advanced Remote Sensing**

Provides students the opportunity to develop further knowledge of remote sensing. Emphasis will be placed on introducing advanced theories and techniques for digital image processing and helping students obtain independent research skills using remote sensing data.

### **GEOG 576 (3) Spatial Statistics**

Descriptive statistics, probability, hypothesis testing, introduction to non-parametric statistics, correlation, introduction to regression analysis, spatial statistics and principles of data representation in graphs, tables and statistical results.

### **GEOG 577 (1-3) Topics in Techniques**

This offering will include a variety of selected technical topics in geography, including (but not limited to) manual cartographic drafting and negative scribing, photomechanical techniques in production cartography, aerial photo interpretation, and advanced coverage of digital analysis of satellite-derived remote sensor data and global positioning systems.

Prerequisite: permission of instructor

### **GEOG 578 (3) Spatial Analysis**

Survey of theoretical frameworks for spatial analysis and geographic quantitative methods. Includes basic and advanced spatial analysis principles and methods for studying and examining spatial patterns. Designed to equip students with the knowledge and skills necessary for carrying out research projects that demand spatial point pattern analysis and analysis of areal units.

### **GEOG 579 (1-4) GIS Practicum**

This offering will include supervised project work in raster-based and/or vector-based GIS, using problems and data drawn from local or regional agencies or other professional-level organizations with whom the Geography Department maintains a relationship. Students must have completed one of the prerequisite courses, or a course or professional-level experience.

Prerequisite: GEOG 373, or 473/573, or permission of instructor

### **GEOG 580 (1-4) Seminar**

Topics vary in physical, cultural, economic, political, and historical geography, as well as environmental conservation and geographic techniques.

### **GEOG 597 (1-10) Internship**

An applied work and learning experience. The student will provide a written internship report on professional practicum and the work supervisor will be consulted on how much the student has accomplished.

Prerequisite: permission required

### **GEOG 609 (1-3) Selected Topics**

The instructor will develop a specific course on a geographic topic (land forms, soils, waters, natural resources, cities, agriculture, or any other topic of a geographic nature).

### **GEOG 610 (1-4) Issues in Physical Geography**

Discussion and analysis of contemporary issues in the field of physical geography. Designed to allow in-depth focus on current problems/issues that geographers will encounter in their professional practice. Topics vary according to instructor.

### **GEOG 620 (1-4) Issues in Cultural Geography**

Discussion and analysis of contemporary issues in the field of cultural geography. Designed to allow in-depth focus on current problems/issues that geographers will encounter in their professional practice. Topics vary according to instructor.

### **GEOG 650 (1-4) Issues in Regional Geography**

Discussion and analysis of contemporary issues in the field of regional geography. Designed to allow in-depth focus on current problems/issues that geographers will encounter in their professional practice. Topics vary according to instructor.

**GEOG 670 (1-4) Issues in Geographic Techniques**

Discussion and analysis of contemporary issues in the field of Geographic Techniques. Designed to allow in-depth focus on current problems/issues that geographers will encounter in their professional practice. Topics vary according to instructor.

**GEOG 673 (3) GIS for Planners**

To introduce URSI and Park and Rec. graduate students to geographical analysis in urban and regional planning through the use of GIS technology, particularly Arc/Info. Students will be introduced to various urban planning projects taking place in various local agencies.

**GEOG 677 (1-4) Individual Study**

A study assignment for a student to meet specific objectives for the student's needs. It could be a term paper, readings, reports, field report, or mapping project. Prerequisite: permission of instructor

**GEOG 678 (3) Geographic Research & Writing**

Required of MS professional degree candidates. To acquaint students with the geographer's perspective and methods of inquiry; to examine types of geographic research; to develop student's ability in producing research papers; to give students experience in writing research papers and to provide students experience in professional oral presentation.

**GEOG 680 (3) Philosophy of Geography**

The history and development of geographic thought from ancient times to the late 20th century.

**GEOG 681 (3) Environmental Issues**

This course surveys various environmental issues within the United States with an emphasis on state and federal legislation and policies. The forces prompting environmental legislation, its subsequent implementation and modification by the courts, and various perspectives about the problems, their possible solutions, and the assessment of current efforts are discussed.

**GEOG 690 (1-4) Topics in Meteorology/Climatology**

The focus of this/these course(s) will be on Meteorology/Climatology. This course may be repeated up to three times.

**GEOG 694 (1-2) Alternate Plan Paper**

Student culminating experience in lieu of a thesis.

**GEOG 698 (1-6) Internship**

An applied work and learning practicum. The student will provide a written report on his/her own learning. The work supervisor will be consulted regarding students' accomplishments.

**GEOG 699 (1-6) Thesis**

A culminating project related to basic or applied research

**GENDER AND WOMEN'S STUDIES MS**

**CERTIFICATE IN GENDER AND WOMEN'S STUDIES**

*College of Social & Behavioral Sciences  
Department of Gender and Women's Studies  
109 Morris Hall • 507-389-2077*

The Master of Science in Gender and Women's Studies is an internationally known program which attracts students from throughout the U.S. and abroad. Historically it has been based predominantly in the social sciences, with input from humanities and sciences. The graduate program combines interdisciplinary coursework, internships, and individual and cooperative research projects. This feminist program integrates theory and activism. Departmental faculty areas of interest include feminist theory, violence against women, gender and law, women's and girls' history, history of sexuality, LGBT/queer studies, social justice activism, sex work, public health, HIV policy, and feminist pedagogy.

A graduate degree in Gender and Women's Studies is beneficial to any work experience in which women are affected — in other words, all. Women's Studies graduates are currently employed as battered women's shelter personnel,

directors of human service programs including displaced homemaker services and community action and advocacy services, family therapists, Women's Studies instructors, newspaper editors, freelance and radio journalists, community organizers, cultural workers, K-12 teachers and college administrators. Other students have used their Women's Studies degrees as a rich preparatory base for doctoral work and law school.

**Admission.** In addition to meeting the general admission requirements of the College of Graduate Studies and Research, a background in Women's Studies coursework and/or experience in community-based women's programs or organizations is required.

**Financial Assistance.** All applicants are encouraged to seek university sources of financial assistance through application to the Office of Financial Aid. See Sources of Financial Assistance at the front of the Bulletin. Graduate assistantships are available in the Department of Gender and Women's Studies, the Women's Center, the Lesbian, Gay, Bisexual, Transgender Center, the College of Social and Behavioral Sciences, Student Health Services, and other campus offices. Second-year students in the program who meet requirements may qualify for teaching opportunities.

**GENDER AND WOMEN'S STUDIES MS**

(Thesis Plan - 30 credits)

(Alternate Plan Paper - 34 credits)

**Required Core**

- WOST 600 Collective Action/Analysis (3)
- WOST 605 Foundations of Women's Studies (3)
- WOST 610 Graduate Seminar (3)
- WOST 620 Feminist Research (3)
- WOST 630 Global Feminisms: Theory & Practice (3)
- WOST 640 Feminist Theories (3)

**Choose one of the following:**

- WOST 697 Internship: College Teaching (1-6; minimum: 3 credits)
- WOST 698 Internship: Community (1-6; minimum: 3 credits)

**Electives**

- WOST 540 Feminist Pedagogy (3)
  - WOST 555 Politics of Sexuality (3)
  - WOST 560 Selected Topics (1-4)
  - WOST 590 Workshop (1-4)
  - WOST 677 Individual Study (1-6) or
- Any electives from the interdisciplinary program course inventory listed below

**Required Thesis or Alternate Plan Paper**

- WOST 694 APP (1-2)
- WOST 699 Thesis (3-6; minimum: 3 credits)

**Additional Requirements**

Students are required to take a 500 or 600 level seminar outside the department. Please consult with your advisor.

Electronic portfolios are required of all students. Students submit portfolios at the end of their second semester of coursework and before writing their thesis or alternate plan paper. For further details, see Departmental Graduate Handbook.

**Interdisciplinary Program Courses**

- ANTH 533 Anthropology of Gender (3)
- ART 519 Gender in Art (3)
- CORR 544 Women in the Criminal Justice System (3)
- CSP 670 Issues in Counseling Women (3)
- EDLD 653 Women in Leadership
- ENG 612 Gender in Literature (3)
- ETHN 570 Women of Color (3)
- ETHN 580 Social Justice in Ethnicity and Gender (3)
- HLTH 500 Women's Health (3)
- HIST 508 History of Women in Pre-industrial Europe (4)
- HIST 587 U.S. Women's History (4)
- NPL 673 Nonprofit Management and Leadership (3)
- PHIL 545 Feminist Philosophy (3)
- POL 524 Women and Politics (3)
- PSYC 560 Psychology of Women (3)

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## GENDER AND WOMEN'S STUDIES

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SOWK 520 Women's Issues in Social Work (3)  
SOWK 527 Social Work & Domestic Violence (3)  
SOC 509 Family Violence (3)  
SPEE 503 Gender and Communication (3)

### Graduate Certificate

The Gender and Women's Studies graduate certificate is available to those currently pursuing a graduate degree or who already have a graduate degree. The program is also intended for post-baccalaureate working professionals. Students seeking a graduate certificate must possess a bachelor's degree. Previous course work in Gender and Women's Studies is preferred but not required.

The Graduate Certificate in Gender and Women's Studies offers students learning opportunities in the following areas:

1. Theory that connects race, class, gender sexuality, and other identity categories.
2. Knowledge of the strategies and tactics the feminist movement has employed to create social change.
3. Communication skills, both oral and written.
4. Historical and philosophical dimensions of women's studies as a movement and a discipline.

The certificate program requires that students maintain a B average and complete 9 credits of 600-level courses in Women's Studies plus one 3-credit elective course at the 500 or 600 level.

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### COURSE DESCRIPTIONS

#### WOST 540 (3) Feminist Pedagogy

We explore the key philosophical and methodological issues in feminist pedagogy with an emphasis on application of the material learned. In addition to readings, discussions, and lectures, students develop a teaching philosophy, design a course, write a syllabus, prepare a lesson plan, teach a session, design evaluations, and develop a curriculum vitae.

#### WOST 555 (3) Politics of Sexuality

This course explores the interconnections between sex, gender, and sexuality with special attention to how institutions and communities shape experience and identity.

#### WOST 560 (1-4) Selected Topics

Topics vary as announced in the class schedule.

#### WOST 590 (1-4) Workshop

Topics vary as announced in the class schedule.

#### WOST 600 (3) Collective Action and Analysis

This course examines historical, cultural, theoretical, and strategic aspects of struggle for social justice, with special attention to women's activism.

#### WOST 605 (3) Foundations of Women's Studies

Overview and analysis of the theoretical, methodological, and activist foundations of Women's Studies as a discipline.

#### WOST 610 (3) Graduate Seminar

Advanced topics in women's and gender studies.

#### WOST 620 (3) Feminist Research

We explore theoretical and epistemological issues in feminist research, as well as developing the practical skills needed to conduct our own research.

#### WOST 630 (3) Global Feminisms: Theory & Practice

This course will address critical issues facing women in "developing" countries in the context of an increasingly globalized order. The purpose of the course is to familiarize students with global issues/global feminist theory.

#### WOST 640 (3) Feminist Theories

This course explores major theories of feminism.

#### WOST 677 (1-6) Individual Study

Concentrated study and research in areas of student's special interests/ expertise under supervision of a faculty member.  
Prerequisite: must be enrolled in the MS program in WOST and have permission of the instructor

#### WOST 694 (1-2) Alternate Plan Paper

Preparation of an alternate plan paper under supervision of the student's graduate advisor.  
Prerequisite: must be enrolled in the MS program in WORST.

#### WOST 697 (1-6) Internship (College Teaching)

Students assist a faculty member in teaching Women's Studies 110 or 220.  
Prerequisite: must be enrolled in the MS program in WOST

#### WOST 698 (1-6) Internship Community

Placement in a community or university-based internship provides the student with experience and practical skills in a particular field of work or service and/or provides an opportunity to pursue a specific research interest.  
Prerequisite: must be enrolled in the MS program in WOST

#### WOST 699 (3-6) Thesis

Preparation of a thesis under supervision of the student's graduate advisory committee.  
Prerequisite: must be enrolled in the MS program in WOST

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## GEOLOGY

*College of Science, Engineering & Technology*  
*Department of Chemistry and Geology*  
242 Trafton Science Center N • 507-389-1963

Geology is the science of the earth. It concerns itself with the materials that constitute the earth, their disposition and structure; the processes of work both on and within the earth; and both the physical and biological history of the earth.

The following graduate courses are offered and may be used to supplement existing graduate programs or may be part of a cross-disciplinary studies program.

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### COURSE DESCRIPTIONS

#### GEOL 501 (1-3) Field Studies

This course is devoted to the study and practice of geological field investigations. Students will first learn basic field investigative methods. Students will then be appropriately versed in the geological history and importance of a region selected for in-depth study. Finally, students will participate in a field trip to a regional site of geological importance over an extended weekend (4-6 days). Potential study sites may include Minnesota's North Shore and Iron Range, the Badlands and Black Hills of South Dakota, the Ozarks, or the Rocky Mountains.  
Prerequisite: GEOL 100 or 121 or 122 V

#### GEOL 550 (3) Hydrogeology

This course introduces physical and chemical studies of hydrogeology. The main area of discussion will include the physical and chemical attributes of aquifers, movement of groundwater and solute through soils and rocks, and reactions between earth materials and pollutants in groundwater systems. The class includes extensive use of MODFLOW and MT3D, the two most commonly used groundwater modeling programs currently available.

#### GEOL 590 (1-4) Workshop

#### GEOL 591 (1-6) In-Service

A course designed to upgrade the qualifications of a person on the job. Content is variable. The course can be repeated for credit.

#### GEOL 677 (1-4) Individual Study

**GERONTOLOGY MS****CERTIFICATE OF STUDY IN GERONTOLOGY**

College of Social & Behavioral Sciences

Gerontology Program

336 Trafton Science Center N • 507-389-6590

Gerontology is the scientific study of the biological, psychological and social aspects of aging. The Gerontology program, in cooperation with the Center on Aging, coordinates the delivery of the curriculum in human aging and facilitates activities of education, research and service which create, disseminate and apply knowledge about aging. The primary purpose of the graduate curriculum in aging is to provide a knowledge base in gerontology which, when combined with professional knowledge and skills, prepares the student for practice in the aging network. The program offers both general and administrative tracks of study at the graduate level. In addition to the Master of Science in Gerontology, Minnesota State also offers a Graduate Certificate of Study in Gerontology and specialized coursework leading to original licensure as a nursing home administrator in Minnesota. The University is a member of the Association for Gerontology in Higher Education.

**Admission.** Applications for admission to the MS in Gerontology program may be submitted at any time. Although entrance in fall semester is preferred, permission may be granted for study to commence at other times during the academic year. Full admission requires a baccalaureate degree, a minimum 3.0 GPA, at least 16 credits of social and behavioral science and evidence of promise for successful graduate study and professional practice with older adults. The GRE is not required.

**Financial Assistance.** One or more graduate assistantships in Gerontology are normally available each year on a competitive basis. Other financial assistance may become available from time to time, e.g., research assistance or special project work. Contact the program director for current information.

**GERONTOLOGY MS**

(Thesis Plan - 30 credits)

(Alternate Plan Paper - 34 credits)

One-half of the total credits for the degree must be 600 level credits (excluding the thesis or alternate plan paper credits). A minimum of 24 credits of Gerontology is required under either plan. Within these 24 credits, a maximum of three credits of internship and either four credits of thesis or two credits of alternate paper research may be included.

**Required Core (15 credits)**

Select a minimum of one course from each of the three core areas. Other core courses can be used as electives.

**Social-psychological**

ANTH 536 Anthropology of Aging (3)  
 PSYC 566 Psychology of Aging (3)  
 SOC 504 Sociology of Aging (3)  
 WOST 545 Women and Aging (3)

**Bio Medical**

BIOL 517 Biology of Aging (3)  
 HLTH 555 Health and Aging (3)

**Policy/Applied Theory**

GERO 585 Topics in Gerontology (1-3)  
 GERO 601 Seminar in Gerontology (1-3)  
 POL 564 Aging: Policy Issues (3)  
 SOWK 519 Social Work and Aging (3)

**Required Courses (9 credits)**

GERO 600 Theories and Practice (3)  
 \_\_\_\_\_ 6\_\_\_\_\_ One 600 level research methods course (3)  
 GERO 697 Internship (6)

**Required Gerontology Electives (8-14 credits)**

Choose Gerontology elective courses in consultation with an advisor:

FCS 574 Residential Management for Families and Special Needs People (3)  
 GERO 580 Nursing Home Administration (3)  
 GERO 677 Individual Study (1-4)  
 HLTH 541 Death Education (3) OR SOC 505 (3) Sociology of Death (3)  
 RPLS 582 Leisure Needs of the Aging (3)

**Required Thesis or Alternate Plan Paper**

GERO 694 Alternate Plan Paper (2)  
 GERO 699 Thesis (3)

**Other electives available in Gerontology**

FCS 574 Residential Management for Families and Special Needs People (3)  
 GERO 580 Nursing Home Administration (3)  
 GERO 677 Individual Study (1-4)  
 HLTH 541 Death Education (3)  
 RPLS 582 Leisure Needs of the Aging (3)  
 SOC 505 Sociology of Death (3)  
 SOWK 519 Social Work and Aging (3)

Additional credits needed to meet degree requirements and to meet the specific educational objectives of the student are to be chosen from the Gerontology list and/or from the offerings of other departments with emphasis on course work at the 600 level. For example, one might include course work in program planning, administration and evaluation and/or graduate-level course work which is required for nursing home administration licensure. Early consultation with the Gerontology Program Director is required to assure careful program planning and maximum utilization of program options. Students completing an APP or thesis will be required to participate in an oral defense of their work.

**CERTIFICATE OF STUDY IN GERONTOLOGY**

The Certificate of Study in Gerontology is granted on completion of 18 credits of approved course work in Gerontology. The program is intended for persons who wish to acquire a core of knowledge and skill in Gerontology but who may not wish to pursue a degree program with a Gerontology component. The certificate signifies completion of an approved multidisciplinary course of study in Gerontology. As such, it may have value to prospective employers who seek evidence of specialized study relevant to working with and on behalf of the elderly. Admission to the certificate program requires formal application to the Gerontology program. Upon admission, a program of study must be developed with and approved by the program director. Academic advising for the certificate program is provided by the director of the Gerontology program.

**COURSE DESCRIPTIONS****GERO 580 (3) Nursing Home Administration**

Issues and trends, programs and services, funding mechanisms and regulations. Meets state educational requirements for specific content areas.

**GERO 585 (1-3) Topics in Gerontology**

Topics vary as announced in class schedule. May be retaken for credit if topic is different.

**GERO 600 (3) Gerontology Theory and Practice**

This course will provide students with an integrated knowledge of theory and practice in gerontology and examine the challenges involved in studying and providing services to the elderly, as well as ethical and advocacy-related issues in an aging society.

**GERO 601 (3) Current Health Issues in Aging**

Topic varies with offering. May be taken more than once.

**GERO 677 (1-4) Individual Study**

Prerequisite: consent

**GERO 694 (1-2) Alternate Plan Paper**

Prerequisite: consent

**GERO 697 (1-6) Internship**

Prerequisite: by application and consent

## HEALTH SCIENCE

### GERO 698 (1-6) Practicum: Nursing Home Administration

For students following the program of study for nursing home administration  
Prerequisite: by application and consent

### GERO 699 (3-6) Thesis

Prerequisite: consent

## HEALTH SCIENCE

### COMMUNITY HEALTH MS

### SCHOOL HEALTH EDUCATION MS

(DISCIPLINE-BASED)

College of Allied Health and Nursing  
Department of Health Science  
213 Highland North • 507-389-1527

Graduate Programs and Post-baccalaureate Certificate in the Department of Health Science

The Department of Health Science offers a Master of Science Degree (MS) in Community Health Education or School Health Education as well as a Post-baccalaureate Certificate in School Health Education. The MS in Community Health Education is designed for community/public health educators interested in an advanced degree. The MS in School Health Education is for licensed teachers seeking an advanced degree in health education or those who have completed the Post-baccalaureate Certificate in School Health Education. Required courses are determined by the choice of either the School Health Education or Community Health Education option. Elective courses are chosen in consultation with the student's graduate advisor to meet the student's educational and professional goals.

**Policy:** A minimum of 50% of all graduate coursework, excluding thesis and APP credit, applied toward the degree must be completed at the 600 level.

#### ADMISSION CRITERIA

Admission to the Graduate Program in the Department of Health Science varies slightly depending on your area of interest.

#### MS Community Health Education

A bachelor's degree from an accredited institution of higher education that clearly shows a major in Health Education, such as Health Education, Community Health Education, Public Health Education, School Health Education OR an official transcript reflecting at least 25 semester hours or 37 quarter hours of coursework with specific preparation addressing the following areas of responsibility for health educators as determined by the National Commission on Health Education Credentialing, Inc. [www.nchec.org](http://www.nchec.org).

- assess individual and community needs for health education
- plan effective health education strategies, interventions, and programs
- implement health education strategies, interventions, and programs
- conduct evaluation and research related to health education
- administer health education strategies, interventions, and programs
- serve as a health education resource person
- communicate and advocate for health and health education

#### MS School Health Education

The Post-Baccalaureate Certificate in School Health Education or a bachelor's degree with an initial teaching license from an accredited institution of higher education.

#### Post-Baccalaureate Certificate in School Health Education

The certificate program requires a teaching degree (initial license) or graduate teaching licensure.

#### MASTER OF SCIENCE IN COMMUNITY HEALTH EDUCATION (30-34)

Thesis: 30 credits

Alternate Plan Paper: 34 credits

#### Required Core: 21 credits

HLTH 575 Biostatistics (3)  
HLTH 560 Intro to Epidemiology (3)

HLTH 630 Techniques of Research in Health (3)  
HLTH 659 Health Care Administration (3)  
HLTH 664 Health Program Planning & Evaluation (3)  
HLTH 665 Theory and Philosophy in Health Education (3)  
HLTH 667 Advanced Health Communications and Advocacy (3)  
HLTH 694 Alternate Plan Paper (1-2) OR  
HLTH 699 Thesis (1-4)

#### Electives: 6-12 credits

HLTH 510 Current Health Issues (3)  
HLTH 550 Environmental Health (3)  
HLTH 551 Stress and Health (3)  
HLTH 555 Health and Aging (3)  
HLTH 554 Chronic and Infectious Diseases (3)  
HLTH 556 Assessment of Chemical Dependency (3)  
HLTH 559 Critical Topics in Health (1-3)  
HLTH 565 Health Care Delivery (3)  
HLTH 567 Public Health Law (3)  
HLTH 569 Chemical Dependency: Dual Diagnosis (3)  
HLTH 588 Worksite Health Promotion (3)  
HLTH 632 Alcohol and Drug Education (3)  
HLTH 662 Human Sexuality (3)  
HLTH 666 International Health (3)  
HLTH 668 Grant Proposal Writing for Health Professionals (3)

#### Post Baccalaureate School Health Education Certificate Program Certificate in School Health Education (21)

*(This program will be available pending final approval from campus and MnSCU officials.)*

#### Required Core: 21 credits

HLTH 510 Current Health Issues (3)  
HLTH 551 Stress and Health (3)  
HLTH 554 Chronic and Infectious Diseases (3)  
HLTH 660 Standards, Assessment and Methods (3)  
HLTH 661 Curriculum Trends (3)  
HLTH 662 Human Sexuality (3)  
HLTH 632 Alcohol and Drug Education (3)

Prerequisite: Teaching Degree (initial license)

Co-Prerequisite: Graduate Teaching Licensure Program

#### MASTER OF SCIENCE IN SCHOOL HEALTH EDUCATION (30-34)

Thesis: 30 credits

Alternate Plan Paper: 34 credits

#### Required Core: 27 credits

HLTH 510 Current Health Issues (3)  
HLTH 551 Stress and Health (3)  
HLTH 554 Chronic and Infectious Diseases (3)  
HLTH 660 Standards, Assessment and Methods (3)  
HLTH 661 Curriculum Trends (3)  
HLTH 662 Human Sexuality (3)  
HLTH 632 Alcohol and Drug Education (3)  
HLTH 575 Biostatistics (3)  
HLTH 630 Techniques of Research (3)  
HLTH 694 Alternative Plan Paper (1-2) OR  
HLTH 699 Thesis (1-4)

#### Electives: Alternate Plan Paper Option-6 credits

HLTH 550 Environmental Health (3)  
HLTH 555 Health and Aging (3)  
HLTH 556 Assessment of Chemical Dependency (3)  
HLTH 559 Critical Topics in Health (1-3)  
HLTH 565 Health Care Delivery (3)  
HLTH 567 Public Health Law (3)  
HLTH 569 Chemical Dependency: Dual Diagnosis (3)  
HLTH 588 Worksite Health Promotion (3)  
HLTH 666 International Health (3)  
HLTH 668 Grant Proposal Writing for Health Professionals (3)

## COURSE DESCRIPTIONS

**HLTH 500 (3) Women's Health**

This course explores current issues, controversies, and concerns affecting women's health. Relationships between social, cultural, psychological, environmental, and physical factors of women's health status are examined.

**HLTH 510 (3) Current Health Issues**

An in-depth review of significant current health concerns and controversies in health science, using the elements of reasoning as the framework for critiquing the issues.

**HLTH 520 (5) Health Teaching Methods**

Overview of methodology and materials used in the school health setting. Review curriculum development, teaching strategies and program administration. Includes the preparation and presentation of lessons.

**HLTH 541 (3) Death Education**

Explores the relationship of death concerns to the process of meaningful living. Uses a variety of learning strategies to examine death attitudes, values, and related behaviors.

**HLTH 550 (3) Environmental Health**

Promotes identification and analysis of environmental influences upon health status. Health concerns related to residential, occupational, and other environments are explored. Problems pertaining to air, water, solid waste, housing, land use, toxic waste, and sanitation are addressed.

**HLTH 551 (3) Stress and Health**

Emphasis is on recognition of, and enhancing awareness about, how stress affects human health and performance. Stress management techniques such as relaxation, effective communication, cognitive-behavioral approaches, eating behaviors, regular exercise, and time management are explored.

**HLTH 554 (3) Chronic and Infectious Diseases**

The purpose of this course is to develop the knowledge and understanding of the causes, symptoms and methods of controlling and preventing chronic and infectious diseases. Primary and secondary prevention strategies will be identified. Emphasis will be placed on those behaviors that foster and those that hinder well-being. Prerequisite: HLTH 260

**HLTH 555 (3) Health and Aging**

This course investigates the physical and mental health concerns of the aging process. Explores specific health problems confronting older persons, and examines preventive health behaviors and health maintenance practices.

**HLTH 556 (3) Assessment of Chemical Dependency**

This course is designed to provide students with practical knowledge and application techniques in assessing an individual with a chemical use/dependency problem. Various assessment techniques will be presented and discussed as to appropriate utilization. This course meets the criteria for Rule 25 training in Chemical Dependency Assessment. Prerequisite: HLTH 225

**HLTH 559 (1-3) Critical Topics in Health**

An in-depth study of specific topics of current interest in the Health Science discipline.

**HLTH 560 (3) Introduction to Epidemiology**

Examines the philosophy and rationale of current epidemiological practice. Requires the application of epidemiological techniques to selected health concerns. Explores the interaction of agent, host, and environment with the emphasis on application of principles of prevention.

**HLTH 565 (3) Health Care Delivery in the United States**

An examination of the system of delivery of health care in the United States from an historical, social, political, and economic perspective.

**HLTH 567 (3) Public Health Law**

An examination of the judicial system and the development, enactment and enforcement of laws as they relate to the public's health.

**HLTH 569 (3) Chemical Dependency: Dual Diagnosis**

This course is designed to provide students with practical knowledge and application techniques in assessing an individual with a chemical use/dependency

problem. Various assessment techniques will be presented and discussed as to appropriate utilization. This course meets the criteria for Rule 25 training in Chemical Dependency Assessment. Prerequisite: HLTH 225

**HLTH 575 (3) Biostatistics**

Introduction to statistical analysis as applied to the health sciences. Examines concepts and methods of statistical procedures applied to health problems and issues.

**HLTH 580 (4) Community and Program Development for Health**

Focuses upon knowledge and skills necessary for community organization and program development. The course identifies and explores methods and techniques needed for organizing a community for implementing health promotion. Prerequisite: HLTH 260, 361, 460

**HLTH 588 (3) Worksite Health Promotion**

The course examines approaches to promote health and prevent disease and injury, and explores other health related issues at the workplace. Assessment, planning, implementation, and evaluation strategies are addressed. Model programs are reviewed and analyzed.

**HLTH 590 (1-4) Workshop**

Intensive educational experience on selected topics related to skill development, content update, or material development. Typically offered in a concentrated format.

**HLTH 630 (3) Techniques of Research in Health**

Examines and applies research methods common to health science. Requires an extensive literature review. This course should be taken near the end of a graduate program when the student is ready to begin work on the thesis or alternate plan paper. The student must have completed a plan of study prior to enrollment.

**HLTH 631 (3) Seminar**

Course requires completion of thesis proposal or alternate plan paper, extensive literature review, and oral presentation for group review. Prerequisite: HLTH 630

**HLTH 632 (3) Alcohol and Drug Education**

Designed to examine the health effects of alcohol with the primary emphasis on the prevention of alcohol-related problems. Those factors influencing the use and abuse of alcohol are covered.

**HLTH 640 (3) Health and Sick Role Behavior**

Reviews concepts of health and illness as they affect individuals, families, and communities. Cross-cultural perspectives and the influence of economics, political, religious, geographical, and educational factors on health are emphasized.

**HLTH 659 (3) Health Administration**

Specific managerial components will be emphasized such as organizational patterns, fiscal administration, and personnel management common to the health system. Administrative functions of policy settings, planning coordination, public issue involvement, and community relations will be included. Particular attention is given to the human side of management.

**HLTH 660 (3) Standards, Assessment and Methods**

Explores health education standards, assessment, and methods for teaching functional knowledge and health-related skills. Requires the development of a assessment plans, assessments, lesson plans, and other materials for aligning, assessing, and teaching functional health knowledge and health-related skills.

**HLTH 661 (3) Curriculum Trends**

Current philosophies and models of health curriculum design are explored. Requires the development of a model curriculum consistent with recent developments in school health education.

**HLTH 662 (3) Human Sexuality**

Explores current issues, controversies, and concerns affecting sexual health. Relationships between social, cultural, psychological, environmental, and physical factors of sexuality are examined.

**HLTH 664 (3) Health Program Planning & Evaluation**

Provides a thorough background on the practical aspects of health planning, including development, adoption, and implementation of health programs.

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## HISTORY

### HLTH 665 (3) Theory and Philosophy of Health Education

Directed toward providing a solid theoretical and philosophical foundation for professional health education practice. Current and historical health education, theoretical and philosophical models, and concepts are explored. Application of these models and concepts to professional practice is emphasized.

### HLTH 666 (3) International Health

An examination of health status and health care delivery systems of developing, transitional, and developed nations. Includes social, economic, and political analysis of health policy formation.

### HLTH 667 (3) Advanced Health Communications and Advocacy

This course focuses upon advanced development of communication and advocacy skills for the health educator. The course provides in-depth coverage of health communication theory, application, and evidence. Students will plan, implement and evaluate an evidence-based health communication program.

### HLTH 668 (3) Grant Proposal Writing for Health Professionals

Designed to make students familiar with the steps of grant writing, explore the various sources of grants available to health professionals, and develop skills and competencies to successfully write grant proposals.

### HLTH 677 (1-4) Individual Study

An in depth project on a topic of particular interest to the student. Project must be approved by the faculty supervisor and department chairperson and proposal filed with department.

### HLTH 690 (1-3) Selected Topics in Health

Provides an in-depth investigation of a topic of particular concern at the time of offering. Topics will deal with timely issues regarding health promotion, disease prevention, and/or social/political concerns regarding health in the modern world.

Prerequisite: may depend on topic

### HLTH 694 (1-2) Alternate Plan Paper

Course requires completion of Alternate Plan Paper and oral presentation for group review.

### HLTH 696 (1-6) Internship: Health Science

A concentrated work experience for those students preparing for a career in community health.

Prerequisite: core courses completed

### HLTH 697 (1-12) Internship: Alcohol and Drug Studies

A concentrated pre-professional experience for those preparing for a career in alcohol and drug studies. Students must successfully complete all alcohol and drug studies core course work and the Alcohol and Drug Studies application and screening process to be eligible for the internship. Students must schedule a meeting with the Coordinator of Alcohol and Drug Studies one semester in advance to schedule their internship placement.

Prerequisite: 3.0 GPA in Alcohol and Drug Studies, core courses completed

### HLTH 699 (1-4) Thesis

Credit for students working on their thesis. Permission of advisor and department chairperson required.

Prerequisite: all core courses and HLTH 630 completed

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## HISTORY MA

### HISTORY MS

*College of Social & Behavioral Sciences  
Department of History  
110B Armstrong Hall • 507-389-1618*

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The Graduate Program in History at Minnesota State University, Mankato provides a foundation for advanced study and professional development that prepares individuals for careers in teaching, law, journalism, public service, museums, and business. Students develop essential career skills, such as the ability to analyze conflicting information and viewpoints, write clearly and communicate ideas, find reliable evidence for judgments about human actions and motives, and place particular events in a broader context.

The graduate history program prepares students for future careers, for responsibilities in a democratic society, and for the challenging ambiguities that they will encounter in life no matter what they do or where they go in the world. The courses encourage a comparative, analytical approach to diverse cultures, historical eras, social conflicts, influential ideas, and the human experience.

Students in the graduate program pursue original research and regularly present their work at professional meetings. Graduate program alumni have gone on to pursue successful careers in a variety of fields, including advance historical study at Ph.D. granting institutions as well as non-academic careers such as banking and journalism.

The Department of History's graduate faculty of 11 professors offers courses in European, United States, Latin American, African, and Asian history. Memorial Library provides access to 27,000 full-text periodicals and more than 200 electronic databases. The library has been a depository for federal documents since 1962 and of Minnesota state documents since 1958. The M.J. Lass Center for Minnesota Studies and the Southern Minnesota Historical Center are located in the library. Interlibrary loan service obtains books and journal articles from other libraries for Minnesota State Mankato student and faculty research.

**Admission Requirements.** In addition to meeting the general admission requirements of the College of Graduate Studies all applicants to the Department of History Graduate Program must have: (1) a minimum GPA of 2.75 on a 4.0 scale for all undergraduate work or a 3.0 for the last 60 undergraduate semester hours; (2) completed at least 16 undergraduate semester credits in history, of which at least 6 must be in United States history and 6 in European history.

Students applying to a Graduate Program in History also must submit the following material directly to:

**Graduate Coordinator  
Department of History  
Minnesota State University, Mankato  
110 Armstrong Hall  
Mankato, MN 56001**

1. A personal essay of 1-2 pages stating why you are interested in pursuing graduate study in History at Minnesota State University, Mankato.
2. Two letters of recommendations in support of your application.

**Advising.** The department graduate coordinator is the initial advisor of all students. Entering students are required to consult with the coordinator before registering for any graduate courses. The permanent advisor is selected when the student submits a plan of study. Regular student-advisor consultation is strongly recommended.

**Financial Assistance.** A limited number of assistantships are available in History. In addition, Affirmative Action graduate assistantships are available for American ethnic minority students. Memorial Library also awards a limited number of graduate assistantships for those with library experience and some are available through various units of Student Affairs. Some students also may qualify for federally financed work-study programs and Guaranteed Student Loans.

## HISTORY MA

(Thesis Plan - 30 credits)

### Core course requirements:

HIST 625 Historiography (3)  
HIST 655 Historical Research and Writing (3)

### Reading Seminar (Choose one of the following):

HIST 600 European Hist  
HIST 602 Non-Western Hist OR  
HIST 604 U.S. Hist (3)

### Research Seminar requirement (Choose one of the following):

HIST 608 European Hist  
HIST 609 Non-Western Hist OR  
HIST 610 U.S. Hist (3)

### 12 credits

### Minimum Department of History electives\*

(not counting Thesis) 15 credits

(\*May substitute 6 non-History credits if approved by advisor and department graduate coordinator)

**Thesis requirement**  
HIST 699 1-6 credits

**Minimum number of credits 30 credits**

**Also Required for MA:** Knowledge of a foreign language acceptable to the Department of History Graduate Committee must be demonstrated by completion of a college level sequence of one academic year with an average grade of at least B.

**Minimum number of credits 30 credits**

## HISTORY MS

Thesis Plan - 30 credits)

**Core course requirement:**

HIST 625 Historiography (3)  
HIST 655 Historical Research and Writing (3)

**Reading Seminar (Choose one of the following):**

HIST 600 European Hist  
HIST 602 Non-Western Hist OR  
HIST 604 U.S. Hist (3)

**Research Seminar (Choose one of the following):**

HIST 608 European Hist  
HIST 609 Non-Western Hist OR  
HIST 610 U.S. Hist (3)

**12 credits**

**Minimum Department of History electives\***  
(not counting Thesis) 15 credits

(\*May substitute 6 non-History credits if approved by advisor and department graduate coordinator)

**Thesis requirement**  
HIST 699 1-6 credits

**Minimum number of credits 30 credits**

## HISTORY MS

(Alternate Paper Plan - 34 credits)

**Core course requirements:**

HIST 625 Historiography (3)  
HIST 655 Historical Research and Writing (3)

**Reading Seminar (Choose one of the following):**

HIST 600 European Hist  
HIST 602 Non-Western Hist OR  
HIST 604 U.S. Hist (3)

**Research Seminar (Choose one of the following):**

HIST 608 European Hist  
HIST 609 Non-Western Hist (3) OR  
HIST 610 U.S. Hist

**12 credits**

**Minimum Department of History electives\***  
(not counting Thesis) 21 credits

(\*May substitute 6 non-History credits if approved by advisor and department graduate coordinator)

**Alternate Plan Paper requirement**  
HIST 694 1-2 credits

**Minimum number of credits 34 credits**

## Requirements for All Programs

1. The College of Graduate Studies requires that at least one-half of each student's program be in courses open only to graduate students. At Minnesota State University, Mankato these are 600-level courses.
2. The College of Graduate Studies requires that students using university resources such as the library, e-mail, or technology services, must register for at least one graduate credit. The College also requires graduate students to register for at least one credit during the semester that they graduate.
3. The Department of History requires that prior to writing the Thesis or Alternate Plan Paper a student must satisfactorily complete a comprehensive examination covering a sub-field of historical study. An oral defense is required for both the Thesis and Alternate Plan Paper.

## COURSE DESCRIPTIONS

### HIST 501 (4) Classical World of Greece & Rome

The history of Greece and Rome stressing political, social, and economic institutions and cultural and intellectual achievements.

### HIST 502 (4) Foundations of Judaism, Christianity, & Islam

A history of western monotheistic religions and their interactions with the secular world and each other from the beginnings of Judaism to the Crusades.

### HIST 503 (4) Middle Ages

A history of the Middle Ages stressing political, social, and economic interactions and cultural achievements.

### HIST 506 (4) Social History of Renaissance and Reformation Europe

European history from the later Middle Ages to the end of the Thirty Years' War (c. 1300-1648). Students will examine the intellectual, religious, and cultural developments in Western Europe, with special attention given to social life and popular culture.

### HIST 507 (4) Age of Absolutism and Enlightenment

The history of Europe from the Treaty of Westphalia to the eve of the French Revolution (1648-1789). Course emphasizes absolutism and constitutionalism, the construction of European empires, the scientific revolution and Enlightenment, and social and economic changes.

### HIST 508 (4) History of Women in Pre-industrial Europe

A history of European women's experiences from Classical Greece and Rome to the French Revolution of 1789. An analysis of changing concepts of gender relations balanced with a study of women's expressions as individuals and as members of socio-economic, ethnic, kin, and religious groups.

### HIST 509 (4) Social History of Pre-industrial Europe

European culture and social life between 1400 and 1789. Topics include marriage and the family, sexuality, economic change, witchcraft, popular religion and Christianization, and the social history of political absolutism.

### HIST 512 (4) Modern Germany since 1500

Review of German history from the Reformation and Thirty Years War to the present, including such topics as Rise of Prussia, Revolution of 1848, Bismarck and the formation of a German Empire, World War I, Weimar Republic and the rise of Hitler, World War II, and Germany since 1945.

### HIST 514 (4) Early England to 1603

England from ancient times to the death of Elizabeth I.

### HIST 515 (4) England since 1603

Political, social, and economic development of England and Great Britain since the death of Elizabeth I.

### HIST 519 (4) France since the Revolution in 1789

Review of French history from the Revolution of 1789 to the present, including such topics as origins and course of the Revolution, Napoleon, Louis XVIII to Third Republic, World War I, World War II and France since 1945.

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## HISTORY

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### **HIST 521 (4) Modern Russia**

A history of Russia and surrounding areas from the fall of Tsarism in 1917 to the modern era.

### **HIST 524 (4) Scandinavian History**

Political, economic, social, cultural, and emigration-immigration history of the Scandinavian countries, including major themes in the mass migration and history of Scandinavians in America. Emphasis on the period, 1500-present.

### **HIST 527 (4) Eastern Europe**

A history of Eastern Europe from the middle ages to the present.

### **HIST 530 (1-4) United States: Selected Topics**

### **HIST 531 (1-4) European History: Selected Topics**

### **HIST 532 (1-4) World History: Selected Topics**

### **HIST 534 (4) East Asian History: 1800 - 1945**

A comparative history of the Chinese and Japanese nations from the 19th century to 1945.

### **HIST 535 (4) East Asian History: 1945 - the Present**

A comparative history of the rise of the Chinese and Japanese nations from 1945 to the present.

### **HIST 536 (4) History of East Asian Relations with the United States**

History of relations of major East-Asian countries with the United States from the late 18th century to the present.

### **HIST 537 (4) African History to 1800**

Investigation of historical developments across the African continent from pre-history through the eighteenth century. Topics will include ancient empires of West Africa, the Swahili coast, the spread of Islam, the trans-Atlantic slave trade and the formation of South Africa's multi-racial society.

### **HIST 538 (4) Modern Africa**

Investigation of historical developments in Sub-Saharan Africa during the nineteenth and twentieth centuries. Topics will include trade with Europe and America, European colonization and African resistance, life in colonial Africa, independence movements, South Africa's apartheid state and the Rwanda genocide.

### **HIST 542 (4) History of Latin America**

Review of Latin American history from Ancient American Civilizations to the present.

### **HIST 550 (4) Minnesota History**

This course will examine Minnesota's social, political, and economic development from the earliest human habitation to the present.

### **HIST 554 (4) Early America to 1763**

This course will examine America's political, social, economic, and cultural development from the earliest settlement of the continent by indigenous peoples to 1763, when provincial Americans began to demand more than token equality in the British Empire.

### **HIST 555 (4) Revolutionary & Early National America 1763-1820**

This course will examine the social, economic, ideological, political, diplomatic, and military experiences of the United States between 1763 and 1820, in order to understand the creation of the American political nation and the culture which developed within it.

### **HIST 558 (4) U.S. History 1820-1861**

This course will discuss the social, economic, and political issues from the rise of Jackson through the beginning of the Civil War. Major issues to be covered include: Jacksonian Democracy, Industrialization, Reform, Westward Expansion, Slavery, and the 1850s.

### **HIST 559 (4) U.S. History 1861-1900**

Examines issues of slavery and conflict between the North and the South leading up to, during, and after the Civil War, and the rise of a socially and culturally diverse manufacturing society by the 1880s.

### **HIST 562 (4) U.S. History 1900-1945**

A history of foreign and domestic themes during the Progressive Era, the 1920s, the Great Depression, and the periods of the two world wars. Includes examinations of reform and radical movements on the left and right.

### **HIST 563 (4) U.S. History 1945-Present**

Social, political, and foreign affairs since World War II.

### **HIST 565 (4) History of U.S. Foreign Relations, 1775-1900**

Explores the economic, strategic, and ideological factors shaping American diplomacy from 1775 to 1900. Students will examine how U.S. policymakers defined their goals and how their assumptions led the United States to pursue territorial and commercial expansion.

### **HIST 566 (4) History of U.S. Foreign Relations in the Twentieth Century**

An examination of the major factors influencing U.S. diplomacy since 1900. Students will examine how influential policymakers defined their diplomatic goals, and how both domestic and external factors have contributed to America's reaction to wars and revolutions around the world.

### **HIST 570 (4) American Frontier**

Occupation of the area between the Mississippi and the Pacific from Spanish exploration to the late 19th century.

### **HIST 571 (4) 20th Century American West**

This course looks at the social, political, and economic developments that transformed the 20th Century American West.

### **HIST 576 (4) Comparative Slavery and Emancipation**

This course will discuss slavery and emancipation in the Atlantic World (Africa, Latin America, and the United States). Students will discover how slavery and emancipation differed in various regions and over time.

### **HIST 577 (3) Advanced African-American History**

A course which deals with the main themes in African-American history and their interpretations.

### **HIST 578 (4) America in Vietnam**

This course will examine the Vietnam War. Students will discover how and why the U.S. became involved in Vietnam, examine the specific problems faced by American diplomats and military officials, and how the war affected American society.

### **HIST 581 (4) U.S. Civil Rights Since 1945**

This course will examine the Civil Rights Movement, broadly defined, from 1945 to the present, but focusing on the period from 1945 to 1970. It will also explore the way in which African Americans and their white supporters mobilized for equality in the face of massive white resistance and seeming federal indifference.

### **HIST 583 (4) American Social and Cultural History**

A history of the intersection of culture and society in America.

### **HIST 584 (4) American Labor History**

An examination of the history of labor and the emergence of social welfare within the context of the modernization of western society and the diversity of the United States.

### **HIST 585 (4) History of American Immigration and Ethnicity**

A historical study of the immigration and ethnic experience in America. It includes an examination of political, social, economic and legal changes that resulted in population movements to the U.S. Attention is given to anti-immigrant movements.

### **HIST 586 (4) American Environmental History**

This course will examine the interaction between humans and the American environment from pre-Columbus to the present.

### **HIST 587 (4) United States Women's History**

This course is designed to provide a survey and analysis of the historical experiences of women in the United States from earliest settlement by indigenous peoples to the present in order to aid students in understanding the contemporary situation of women in American society.

**HIST 590 (1-4) Workshop**

Specific titles to be announced in departmental course descriptions. P/N only.

**HIST 600 (3) Reading Seminar in European History**

Intensive reading on a specialized historical topic. May be repeated once under a different instructor and sub-title.

**HIST 602 (3) Reading Seminar in Third World History**

Intensive reading on a specialized historical topic. May be repeated once under a different instructor and sub-title.

**HIST 604 (3) Reading Seminar in United States History**

Intensive reading on a specialized historical topic. May be repeated once under a different instructor and sub-title.

**HIST 608 (3) Research Seminar in European History**

May be repeated once under a different instructor and sub-title.

**HIST 609 (3) Research Seminar in Third World History**

Introduces students to research methodologies and techniques in Third World history including Asia, Africa, and Latin America. May be repeated once under a different instructor and sub-title.

**HIST 610 (3) Research Seminar in United States History**

May be repeated once under a different instructor and sub-title.

**HIST 625 (3) Historiography**

Survey of major historical writings and interpretations.

**HIST 655 (3) Historical Research & Writing**

**HIST 677 (1-4) Individual Study**

**HIST 691 (1-4) In-Service**

**HIST 694 (1-2) Alternate Plan Paper**

**HIST 697 (1-12) Internship**

Practical work experience in teaching or in an historical agency.

**HIST 699 (1-6) Thesis**

**HUMANITIES**

*College of Arts and Humanities  
Humanities Program  
230 Armstrong Hall • 507-389-2350*

**Certificate program in Teaching Interdisciplinary Humanities**

The certificate program addresses the needs of prospective and practicing teachers who, by interest or their school's specific needs, need to acquire specific skills in teaching interdisciplinary humanities courses. Because the program's audience will require accessible, practical, and pedagogically-driven courses and a program that can be completed quickly, its courses will be delivered at times and on platform that ensue maximum flexibility.

**Core Courses**

- HUM 550 Humanities Seminar (4)
- HUM 631 Seminar - Teaching Interdisciplinary Humanities (3)
- HUM 652 Bibliography and research in Interdisciplinary Humanities (2)
- HUM 676 Humanities Portfolio (2)
- HUM 698 Teaching Internship in Humanities (4)

**Electives**

Select two Education courses, in consultation with an advisor, such as

- KSP 507 Teaching in a Multi-cultural Society (3)
- KSP 550 Human Relations in a Multicultural Society (3)
- KSP 630 Material for Young Adults (3)
- KSP 634 Instructional Design and Production (3)

**COURSE DESCRIPTIONS**

**HUM 550 (4) Humanities Seminar**

Studies of selected periods, issues, artifacts, or texts from an interdisciplinary perspective.

**HUM 631 (3) Seminar-Teaching Interdisciplinary Humanities**

The course exposes students to texts, issues, strategies, and materials to be used in designing and assessing the effectiveness of an interdisciplinary humanities course. Part of the course will involve participants observing how Humanities classes are taught and evaluating what they have observed.

**HUM 652 (2) Bibliography and research in Interdisciplinary Humanities**

This course introduces the prospective and practicing teacher to research tools, strategies, and materials related to interdisciplinary humanities that can be used to write the Plan B paper or Portfolio and that can be imported into classroom activities that these teachers' students will be doing.

**HUM 676 (2) Humanities Portfolio**

This course will proceed as a directed written project as the culmination of a student's internship in which she reflects on and analyzes the planning and actual teaching associated with that experience and contemplates changes necessary for a more successful experience.

**HUM 677 (1-6) Individual Study**

Interdisciplinary study in an area for which student has basic preparation. Prerequisite: approval of faculty

**HUM 698 (4) Teaching Internship in Humanities**

A prospective or practicing teacher will team with a faculty person at Minnesota State Mankato, at a community college, or in an area high school to deliver an interdisciplinary humanities course and enter into a formal contract that articulates the intern's responsibilities.

**HUMAN PERFORMANCE**

*College of Allied Health and Nursing  
Department of Human Performance  
1400 Highland Center • 507-389-6313*

See PHYSICAL EDUCATION

**INFORMATION TECHNOLOGY MS**

*Department of Information Systems and Technology  
273 Wissink Hall • 507-389-2968*

The Master of Science degree in Information Technology program of study prepares the student for a career as a computing professional, yet offers enough flexibility to allow a student to design a course of study suitable for preparation for doctoral work in information technology. The program is designed to offer graduate level educational opportunities with an applied computing perspective. It addresses the pre-service as well as occupational and career advancement needs of baccalaureate-prepared computer technologists. The program objectives are:

1. To address the needs of Minnesota's public and private enterprises by providing opportunities within the state of Minnesota for graduate study in applied computing area.
2. To provide a graduate degree program for practicing information technologists who have clearly defined academic needs related to professional advancement and/or specialization.
3. To offer a graduate program for baccalaureate students who want to continue their education and gain specialized knowledge and skills in any area of information technology.
4. To expand the functional role of the Department of Information Systems and Technology in service to the Mankato area and the state of Minnesota.

These objectives are met by a curriculum with core studies in informatics in general

## INFORMATION TECHNOLOGY

including software development, networking, information security, databases and research methods. The core studies provide the foundation upon which students develop an academic program appropriate to their interests, culminating in a research experience.

**Admission Requirements.** In addition to meeting the general admission requirements of the College of Graduate Studies and Research, successful applicants must meet the following requirements for admission:

1. The Graduate Record Examination (GRE) is required (contact department for specific requirements) if the applicant's GPA is less than 3.0.
2. Applicants must have an undergraduate degree in information technology, information systems, computer science, management information systems or a related field. Qualified students with other backgrounds may be granted provisional admission and are required to complete undergraduate courses in core areas of information technology. All students must meet all prerequisite requirements of the graduate level courses in which the student plans to enroll. Prerequisites for core courses will be considered deficiencies until satisfied.

For admission to the Information Technology MS Program, applicants must provide a one-page statement of career interests and goals.

**International Students.** International Students must take the TOEFL exam and score at least 550. Additionally, the student's undergraduate transcript must be verified by a credential evaluation service if it is not from a US institution. International students should visit the CGSR's international student website for additional information.

**Financial Assistance.** Teaching, Lab Project and Research Assistantships requiring professional computer knowledge are available in the IS&T department and from various other departments and administrative offices. Applications are posted on the school's Academic and Administrative Job Postings web page.

### INFORMATION TECHNOLOGY MS

(Thesis Plan – 32 credits)

(Alternate Plan Paper – 34 credits)

(Course Work Plan – 36 credits)

#### Required Core

Choose a minimum of 13 credits from the following:

IT	600	Research Methods (3)
IT	602	Research Seminar (1)
IT	640	Advanced Database Systems (3)
IT	641	Distributed Database Systems (3)
IT	662	Data Communications and Networking (3)
IT	680	Software Engineering Project (3)

#### Required Electives

Choose a minimum of 8 credits from any one of the following groups:

#### Database Technologies

IT	540	Database Management Systems II (4)
IT	542	Database Security, Auditing, and Disaster Recovery (4)
IT	544	Data Mining and Warehousing (4)
IT	583	Web Application and Human Interface Design (4)

#### Networking and Information Security

IT	542	Database Security, Auditing, and Disaster Recovery (4)
IT	550	Information Warfare (4)
IT	560	Network and Security Protocols (4)
IT	562	Network Administration and Programming (4)
IT	564	Application of Wireless and Mobile Networks (4)
IT	583	Web Application and Human Interface Design (4)

#### Software Development

IT	514	Advance Object-Oriented Programming with Design Pattern (4)
IT	580	Software Quality Assurance and Testing (4)
IT	582	Human Computer Interaction (4)
IT	583	Web Application and Human Interface Design (4)
IT	584	Software Engineering (4)

#### Electives

Choose credits in any combination from the following or above to satisfy the total credit requirement for the Information Technology MS

#### 600-level courses from the following list:

IT	601	Research Topics (3)
IT	630	Advanced Artificial Intelligence (3)
IT	631	Knowledge-Based Systems (3)
IT	677	Individual Study (1-4)
IT	690	Statistical Inference Packages (3)

Any other 500-level courses from the Department of Information Systems & Technology

Up to 8 credits of 5/600-level non-departmental courses in consultation with the advisor (Max. 4 credits at 500 level from non-departmental sources)

#### Required Capstone Experience

IT	699	Thesis (3-6) (thesis option) OR
IT	694	Alternate Plan Paper (1-2) (alternate plan paper option) OR
IT	597	(1-4 credits) OR
IT	6xx	(coursework option)

It is required that at least 50% of the credits required for the MS degree must be earned in courses restricted to graduate students and listed as 600 level (excluding Thesis and APP credits).

Prior to registering for IT 694 or IT 699, the student must satisfy the comprehensive examination requirement and must have successfully completed the core course credits. Students must be registered for a minimum of one credit of Thesis/APP for every semester that they are working on their paper.

#### Comprehensive Examination Requirement

The comprehensive examination will contain questions from the IT core except for IT 602. The comprehensive examination will be waived if the student obtains a 3.5 GPA in the core courses.

#### Graduate Certificate in Database Technology

This program provides the basic concepts, skills, and values for pursuing a career in computer and information science, emphasizing design and implementation of sophisticated database systems and related software.

IT	540	Database Management Systems II (4)
IT	640	Advanced Database Systems (3)
IT	641	Distributed Database Processing (3)

## COURSE DESCRIPTIONS

### ISYS 541 (4) Database Modeling for Applications

Data modeling using techniques such as E/R, UML, ORM, and LDS. Requirements analysis, conceptual data modeling, and transformation of models, SQL. Higher normal forms, advanced SQL, object-relational mapping, and use of complex data models in business applications. Prerequisite: consent of instructor

### ISYS 550 (4) Information Warfare

The course includes information warfare principles and technologies. The key areas are: Information warfare concepts; Protocols, Authentication, and Encryption; Network attack techniques, methodologies, and tools; Network defense; Malware: trojans, worms, viruses, and malicious code; Electronic crimes and digital evidence.

Prerequisite: consent of instructor

### ISYS 580 (4) Software Quality Assurance and Testing

This course focuses on the processes, methods and techniques for developing quality software, assessing software quality, and maintaining software quality. Software testing processes at the unit, module, subsystem, and system levels is discussed. Testing methods covered include: automatic and manual generation of test data, static vs. dynamic analysis, functional testing, inspections, and reliability assessment.

Prerequisite: consent of instructor

### ISYS 582 (4) Human Computer Interaction

Human factors issues in the development of software, use of database systems, and design of user interfaces for interactive systems. Science base and software engineering with user interface development environments. Issues include: com-

mand languages, menus, forms, and direct manipulation, graphical user interfaces, computer supported cooperative work, information search and visualization, World Wide Web design, input/output devices, and display design.

Prerequisite: consent of instructor

#### **ISYS 584 (4) Software Engineering**

This course introduces students to all important aspects of the discipline. The main purpose of the course is to simulate the engineering of a software product, from gathering requirements through implementation and maintenance. The course emphasizes traditional development methodology. Students will be introduced to Visual Basic and Microsoft Project, but the emphasis of the course will be on principles of software engineering, including project planning, requirements gathering, size and cost estimation, analysis, design, coding, testing, and implementation.

Prerequisite: consent of instructor

#### **ISYS 597 (1–12) Internship**

This course is designed to provide students with an opportunity to utilize their training in a real-world business environment. Participants are placed and supervised in selected locations by the internship coordinator for a minimum period of one semester while working under the guidance and direction of a full-time staff member. Prerequisite: Completion of core and consent.

### **INFORMATION TECHNOLOGY**

#### **IT 512 (4) Graphics**

Concepts and algorithms used in computer graphics, including polygonal and curved images in both 2 and 3 dimensions, representation of solid objects, and color and illumination models. Pre: consent of instructor

#### **IT 514 (4) Advanced Object-Oriented Programming with Design Patterns**

This course endeavors to provide the student with a solid understanding of the principles, techniques and tools involved in advanced object-oriented programming as it is practiced in enterprise industries. The successful student should have a distinct advantage in the marketplace.

Prerequisite: consent of instructor

#### **IT 530 (4) Intelligent Systems**

This course offers an overview of the field of intelligent systems. Emphasis is placed on rule-based expert systems, fuzzy rule-based systems, artificial neural networks and evolutionary computation. Uncertainty management in rule-based systems is covered in detail.

Prerequisite: consent of instructor

#### **IT 532 (4) Robotics**

Current practice and future directions in robotics including robot anatomy, kinematics, sensors, sensor interfacing and fusion, mobile robotics, realtime programming, vision and image processing algorithms, subsumption architecture.

Prerequisite: consent of instructor

#### **IT 540 (4) Database Management Systems II**

Extensive coverage of query processing and optimization; concurrency control and recovery, and security and integrity in centralized/distributed environments. Team-oriented projects in a heterogeneous client server environment.

Prerequisite: consent of instructor

#### **IT 542 (4) Database Security, Auditing, and Disaster Recovery**

This course provides science and study of methods of protecting data, and designing disaster recovery strategy. Secure database design, data integrity, secure architectures, secure transaction processing, information flow controls, inference controls, and auditing. Security models for relational and object-oriented databases.

Prerequisite: consent of instructor

#### **IT 544 (4) Data Mining and Warehousing**

The course offers a detailed overview of data mining and warehousing. Emphasis is placed on data mining strategies, techniques and evaluation methods. The star schema and other warehousing methods are covered. Students learn to experiment with several data mining and warehousing tools.

Prerequisite: consent of instructor

#### **IT 550 (4) Information Warfare**

The course includes information warfare principles and technologies. The key areas are: Information warfare concepts; Protocols, Authentication, and Encryption; Network attack techniques, methodologies, and tools; Network defense;

Malware: trojans, worms, viruses, and malicious code; Electronic crimes and digital evidence.

Prerequisite: consent of instructor

#### **IT 560 (4) Network and Security Protocols**

Advanced coverage of data communication, networking and security protocols. Topics include: data transmission methods, error detection and recovery, flow control, routing, data throughput, security issues, and performance analysis of existing and emerging protocols for secure communication between the many points within a computer network and across the Internet.

Prerequisite: consent of instructor

#### **IT 562 (4) Network Administration and Programming**

Network and server systems administration include: domain administration; file system management; networked printers; user management; and workstation configuration. Network programming experience will be gained through programming assignments/projects in Layered Software Systems, HTTP Server, UDP (TFTP or DNS), CGI program, IPV6, RPC/SCTP.

Prerequisite: consent of instructor

#### **IT 564 (4) Applications of Wireless and Mobile Networks**

This course provides an understanding of existing and emerging mobile and wireless data networks, with an emphasis on digital data communications. Students will gain an understanding of the unique considerations that must be given to network protocols for wireless and mobile communication as well as their applications.

Prerequisite: consent of instructor

#### **IT 580 (4) Software Quality Assurance and Testing**

Topics include software quality assurance, software quality metrics, software configuration management, software verification and validation, reviews, inspections, and audits, configuration control boards and software process improvement models, black-box and white-box testing models.

Prerequisite: consent of instructor

#### **IT 582 (4) Human Computer Interaction**

Concepts and techniques for user interface design and human computer interaction. Emphasizes user-centered design, interface development techniques, and usability evaluation. Various interface devices and metaphors will be considered. Visual development environments and other development tools will be studied. Students will complete a substantial project.

Prerequisite: consent of instructor

#### **IT 583 (4) Web Applications and User Interface Design**

HTTP Protocol; Presentation abstractions; Web-markup languages; Client-side programming; Server-side programming; Web services; Web servers; Emerging technologies; Security; Standards & Standard Bodies; Techniques for web interface design; User-centered design; Visual development environments and development tools; Measure the effectiveness of interface design.

Prerequisite: consent of instructor

#### **IT 584 (4) Software Engineering**

This is a course in software engineering that introduces the student to all important aspects of the discipline. The main purpose of this course is to stimulate the engineering of a software product, from gathering requirements through implementation and maintenance. The course emphasizes a traditional development methodology. Students will be introduced to Visual Basic and Microsoft Project, but the emphasis of the course will be on principles of software engineering including project planning, requirements gathering, size and cost estimation, analysis, design, coding, testing, and implementation.

Prerequisite: consent of instructor

#### **IT 588 (4) Rapid Application Development**

In-depth understanding of low and high CASE tools and rapid application development. CASE tools will range from the traditional software development life cycle to object-oriented client/server environments. Extensive team-oriented applications will be developed using tools such as SYNCON, OBSYDIAN, Power Builder, and MSSQL server.

Prerequisite: consent of instructor

#### **IT 597 (1–12) Internship**

Provides students with opportunity to utilize their training in a real-world business environment working under the guidance and direction of a faculty member. (At most 4 hours toward a major in this department.)

Prerequisite: Permanent admission to IT and consent

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## INFORMATION TECHNOLOGY

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### IT 600 (3) Research Methods

Research methodology in general and in computer science. Data and research sources. Analysis of existing research. Preliminary planning and proposals. Conceptualization, design, and interpretation of research. Good reporting.  
Prerequisite: an elementary statistics course

### IT 601 (3) Research Topics

Special topics in computer science research not covered in other courses. May be repeated for credit on each new topic.

### IT 602 (1) Research Seminar

Students attend seminar presentations and present a research topic at one of the seminars.  
Prerequisite: consent

### IT 630 (3) Advanced Artificial Intelligence Systems

This course is a continuation of Artificial Intelligence (CS 530). Emphasis is placed on advanced topics and the major areas of current research within the field. Theoretical and practical issues involved with developing large-scale systems are covered.  
Prerequisite: CS 530

### IT 631 (3) Knowledge-Based Systems

The design of large-scale, knowledge-based systems. Emphasis on both theoretical and practical issues. Examination of alternative knowledge representation techniques and problem-solving methods used to design knowledge-based systems.  
Prerequisite: CS 530

### IT 640 (3) Advanced Database Systems

In-depth study of advanced topics such as object-oriented databases, intelligent database systems, parallel databases, database mining and warehousing, distributed database design and query processing, multi-database integration and interoperability, and multilevel secure systems.  
Prerequisite: CS 540

### IT 641 (3) Distributed Database Processing

Introduction to distributed database systems, resource allocation, homogenous vs. heterogeneous databases, schema integration, distributed concurrency control and recovery, and other topics dealing with distributed database processing.  
Prerequisite: CS 540

### IT 662 (3) Data Communications and Networking

This course will focus on research, design, and analysis of computer networks and data communications systems. The course will also entail detailed examination of modern communication standards, protocol systems and their implementation. Additional topics may include transmission technology, packet switching, routing, flow control, and protocols.  
Prerequisite: IT 562 or 564

### IT 677 (1-4) Individual Study

Problems on an individual basis. Prerequisite: consent

### IT 680 (3) Software Engineering Project

Advanced software design, analysis, and development techniques under realistic time and budget constraints. Hands-on project management techniques. Emphasis of concepts through immersion in a team project of significant size.  
Prerequisite: CS 580

### IT 690 (3) Statistical Inference Packages

Statistical package programs used in data collection, transformation, organization, summarization, interpretation and reporting. Statistical description and hypothesis testing with statistical inference. Interpreting outputs. Chi-square, correlation, regression, analysis of variance, nonparametrics, and other designs. Accessing and using large files (U.S. Census data, National Health Survey, etc.)  
Prerequisite: a statistics course

### IT 691 (1-6) In-Service in Computer Science

A course designed to upgrade the qualifications of persons on-the-job.  
Prerequisite: consent

### IT 694 (1-2) Alternate Plan Paper

Preparation of a master's degree alternate plan paper under the direction of the student's graduate advisor.  
Prerequisite: consent

### IT 699 (1-6) Thesis

Preparation of a master's degree thesis under the direction of the student's graduate advisor.  
Prerequisite: consent

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## MANUFACTURING ENGINEERING TECHNOLOGY MS

*College of Science, Engineering & Technology*  
*Department of Automotive and Manufacturing Engineering Technology*  
205 Trafton Science Center E • 507-389-6383  
Fax: 507-389-5002

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Manufacturing Engineering Technology is a Master of Science program intended for students with an undergraduate degree in engineering technology or engineering who have a desire to obtain a specialized education in modern manufacturing. Students with other undergraduate majors may also enter the program but may have a considerable number of deficiencies which must be made up at the undergraduate level. The emphasis of the program is the technology and organization of manufacturing in a competitive global world.

**Admission.** Students seeking admission to the Manufacturing program must be admitted to the College of Graduate Studies and Research and in addition must have completed undergraduate coursework which includes: Calculus I, Calculus II, a Computer Science programming language, Electronic Circuit Analysis, Computer Aided Design (CAD), Materials Processing and Metallurgy I, Materials Processing II, Statics, and Manufacturing Automation.

Applicants who do not have the prerequisites completed will be conditionally admitted to the program with the undergraduate courses listed as deficiencies. These deficiencies must be made up before the student submits a plan of study before the completion of the first 16 graduate credits.

**Financial Assistance.** The department typically has one to two graduate assistants. Duties include assisting research and laboratory supervision. Application forms are available from the College of Graduate Studies and Research or from the Department of Automotive and Manufacturing Engineering Technology. Completed forms and any support materials should be sent to the department chairperson. Applications can be completed at any time. The department typically makes its decision in May for assistantships which begin in August.

### MANUFACTURING ENGINEERING TECHNOLOGY MS

(Thesis Plan - 32 credits)  
(Alternate Plan Paper - 34 credits)

#### Required Core (16 credits)

MET 525 Project and Value Management (4)  
MET 600 Manufacturing Research Methods (2)  
MET 645 CAD Applications (2)

#### And one of the following:

MET 678 Manufacturing Processes (2)  
MET 692 Manufacturing Seminar (1-3)  
MET 697 Internship (1-4)\*

\*No more than four internship credits may apply toward the 16 MET core credits

Choose additional electives in MET to total 16 credits.

#### Required Concentration (10 credits)

Choose 10 credits in a concentration area in another department such as automotive engineering technology, business, computer science, or one of the natural sciences. The area chosen should reflect the background and occupational goals of the individual and must be approved by the student's graduate committee.

#### Required Electives (6-8 credits)

These courses can be from any graduate level courses.

#### Required Thesis or Alternate Plan Paper

MET 694 or AET 694 Alternate Plan Paper (2)  
MET 699 or AET 699 Thesis (3-4)

**Additional Requirements:**

Each student must obtain practical experience in manufacturing through an internship, independent study, alternate plan paper or manufacturing work experience. A minimum of 50% of all graduate level coursework applied toward the degree must be at the 600 level, excluding thesis/alternate plan paper credits. Each student must successfully complete a final presentation of their thesis or alternate plan paper.

COURSE DESCRIPTIONS

**MET 507 (3) Manufacturing Resource Planning and Control**

Planning and control of plant resources in globally competitive manufacturing environments. Studies include hard and soft technology assets applied to systematic resource management in the manufacturing supply chain. Approaches to manufacturing problems related to design integration, production scheduling, staffing, plant layout, material flow and inventory issues are examined.

**MET 523 (4) Ergonomics & Work Measurement**

Investigation of work place design and environmental stress from heat, noise, vibration, repetitive motion, and illumination in personal machine systems, and human-machine interaction.

**MET 524 (2) Industrial Safety**

Techniques of developing safety practices in an industrial and construction environment. Topics include OSHA, current legislation, cost analysis, minimization, depreciation and economic worth, personal protection, employee selection, psychological aspects, product safety, hazard materials, and catastrophe control.

**MET 525 (4) Project & Value Management**

A study of the optimal relationship between value and function of products and the cost and availability of resources. Topics include valuation, appraisal and capital budgeting, cost minimization, depreciation and economics worth, rates and rate bases, original and reproduction costs, and engineering economics.

**MET 526 (3) Logistics & Transportation**

Fundamentals of logistics and supply chain management: control of materials, WIP, finished goods; costs of logistics. Theory and step-by-step procedures used to analyze logistic systems, packaging and transportation, including global logistics.

**MET 527 (3) Quality Management Systems**

This course is focused on quality assurance systems, management philosophies, methodology, function and impact of quality systems in manufacturing operations. Development and application of statistical process control tools. Prerequisite: Basic manufacturing and design knowledge for industry sector discipline and elementary statistics.

**MET 592 (1-3) Seminar: Manufacturing**

Selected manufacturing topics. May be repeated for credit with different topics, with advisor's approval.

**MET 600 (2) Manufacturing Research Methods**

Research topics and methods related to manufacturing. The course will look at the current state of manufacturing and explore the research methods and experimental design procedures that are used in the area of manufacturing. Students will evaluate past research and will also design a research project in manufacturing.

**MET 645 (1-3) CAD Applications**

An advanced graphics course which emphasizes the study of ProE® software, related software, and CAD applications. Emphasis is on CAD systems, software customizing, and a review of current trends in CAD as used in contemporary industry.

**MET 677 (1-4) Individual Study**

**MET 678 (2) Manufacturing Processes**

A study of modern manufacturing processes. The recent developments in manufacturing affect everyone in the factory, from the designers and manufacturing engines to the machine operators. New technologies, automation, the use of the computers in design, process control, and inspection create complex industrial or plant environment.

**MET 692 (1-3) Seminar: Manufacturing**

Selected manufacturing topics. May be repeated for credit with different topics, with advisor's approval.

**MET 694 (1-2) Alternate Plan Paper**

A total of two credits is required to complete the APP option.

**MET 697 (1-5) Internship: Industrial**

Manufacturing work experience in an area pertinent to the student's objective. Registration required prior to beginning employment.

**MET 699 (2-4) Thesis**

A total of three credits is required to complete the thesis option.

**MATHEMATICS MA**

(WITH BROAD SELECTION EMPHASIS, MATHEMATICS AND COMPUTER SCIENCE EMPHASIS, OR COMMUNITY COLLEGE TEACHING EMPHASIS)

**MATHEMATICS AND STATISTICS MS**

**MATHEMATICS EDUCATION MS**

(DISCIPLINE-BASED)

*College of Science, Engineering, & Technology  
Department of Mathematics and Statistics  
273 Wissink Hall • 507-389-1453*

The Department of Mathematics and Statistics offers programs leading to a master's degree in Mathematics and Statistics. The Master of Arts programs allow students to study pure mathematics, mathematics for community college teaching, or mathematics and computer science. The Master of Science programs allow students to specialize in secondary teaching, or mathematics and statistics.

Eighteen graduate faculty support the graduate programs. Faculty specialties include applied computational mathematics, ring theory, combinatorial matrix theory, stochastic differential equations and stochastic processes, partial differential equations and industrial mathematics, topology and dynamical systems, statistics, numerical analysis, probability, algebraic combinatorics and discrete mathematics, complex analysis, real analysis, geometry, optimization, and both elementary and secondary mathematics education.

Graduates of the program have found employment in a variety of fields, including software engineering, graphic design, insurance, community college teaching, secondary mathematics teaching and as statisticians. Others have gone on to obtain a Ph.D. in mathematics.

Admission. In addition to completing the general admission requirement for the College of Graduate Studies and Research, applicants with grade point averages below 2.75 may qualify by presenting GRE verbal, quantitative and analytical scores of 500 on any one part or a minimum composite of 1350.

Facilities. The Department of Mathematics and Statistics is housed in Wissink Hall. This building is also home to the Academic Computing Center which houses over 400 up-to-date workstations on both PC and Macintosh platforms, and a computer-equipped classroom designed for the teaching of mathematics and statistic. The classroom computers are equipped with mathematical and statistical software including Mathematica, Matlab, Maple, SAS, SPSS, Geometer's Sketchpad, and Minitab. Students also have access to Unix mainframe machines and a High Performance Computing (HPC) cluster. The internet is easy to access through the campus-wide wireless network. The library has a wide range of mathematical texts and journals. The library also supports services which provide access to literature not found in the library's collection.

**Financial Assistance.** Approximately 15 graduate assistantships are available in the department each year. Graduate assistant duties include teaching or research assistantships.

**MATHEMATICS MA**

(Broad Selection Emphasis)

The Master of Arts program allows students to choose a course of studies devoted to one of three different emphases: a broad selection of courses in mathematics, a sequence of courses in both mathematics and computer science, or preparation for community college teaching.

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## MATHEMATICS

(Thesis Plan - 34 credits)  
(Alternate Plan Paper - 34 credits)

### Required Core Courses (29-31 credits)

The first four courses (or their equivalent) are required. Only two of them may be counted towards the degree. The other two will be regarded as deficiencies.

MATH 517 Real Analysis I (3)  
MATH 547 Linear Algebra (3)  
MATH 570 Numerical Analysis (4)  
STAT 555 Theory of Statistics I (4) and  
MATH 518 Real Variables II (3)  
MATH 605 Graphs and Algorithms (3)  
MATH 611 Real Analysis (3)  
MATH 620 Applied Mathematics (3)  
MATH 641 Topics in Modern Abstract Algebra (3)  
STAT 653 Linear Models (3)  
MATH 672 Numerical Solutions of Ordinary Differential Equations (2) OR  
MATH 674 Computations in Linear Algebra (2)  
MATH 692 Topology (3)

### Required Elective Courses (0-4 credits)

500/600 level courses that must be approved by the student's advisor.

### Required Thesis or Alternate Plan Paper

MATH 694 Alternate Plan Paper (1)  
MATH 699 Thesis (3)

**Additional Requirements:** At least half of the credits applied to the program must be earned in 600 level courses excluding thesis or alternate plan paper credits. Each student is assigned an initial advisor. After completing 16 credits the student must select a three-member examining committee and form a program of study. A student may choose to write an alternate plan paper or thesis. This program requires a comprehensive exam, and an oral defense of the alternate plan paper or thesis.

## MATHEMATICS MA

### (Mathematics and Computer Science Emphasis)

(Thesis Plan - 34 credits)  
(Alternate Plan Paper - 34 credits)

### Required Core Courses (30-32 credits)

The first four courses (or their equivalent) are required. Only two of them may be counted towards the degree. The other two will be regarded as deficiencies.

MATH 517 Real Analysis I (3)  
MATH 547 Linear Algebra (3)  
MATH 570 Numerical Analysis (4)  
STAT 555 Theory of Statistics I (4) and  
MATH 605 Graphs and Algorithms (3)  
MATH 620 Applied Mathematics (3)  
MATH 672 Numerical Solutions of Ordinary Differential Equations (2) OR  
MATH 674 Computations in Linear Algebra (2)  
COMS 520 Computer Organization II (4)  
COMS 560 Operating Systems (4)  
COMS 610 Algorithm Analysis (3)  
COMS 611 Theory of Computation (3)

### Required Elective Courses (0-4 credits)

500/600 level courses that must be approved by the student's advisor.

### Required Thesis or Alternate Plan Paper

MATH 694 Alternate Plan Paper (1)  
MATH 699 Thesis (3)

**Additional Requirements.** At least half of the credits applied to a program must be earned in 600 level courses excluding thesis or alternate plan paper credits. After completing 16 credits the student must select a three-member examining committee and form a program of study. A student may choose to write an alternate plan paper or thesis. This program requires a comprehensive exam, and an oral defense of the alternate plan paper or thesis.

## MATHEMATICS MA

### (Community College Teaching Emphasis)

(Thesis Plan - 34 credits)  
(Alternate Plan Paper - 34 credits)

Students interested in teaching at the Community College level should see their advisor about identifying methods courses to strengthen their teaching ability. Licensure is not required to teach at the Community College level, but courses in teaching skills are recommended.

### Required Core Courses (27-29 credits)

The first four courses (or their equivalent) are required. Only two of them may be counted towards the degree. The other two will be regarded as deficiencies.

MATH 517 Real Analysis I (3)  
MATH 547 Linear Algebra (3)  
MATH 570 Numerical Analysis (4)  
STAT 555 Theory of Statistics I (4) and  
MATH 518 Real Analysis II (3)  
MATH 611 Real Analysis (3)  
MATH 620 Applied Mathematics (3)  
MATH 641 Topics in Modern Abstract Algebra (3)  
STAT 653 Linear Models (3)  
MATH 692 Topology (3)  
KSP 676 Adult Development and Learning (4)

### Required Elective (2-6 credits)

500/600 level courses that must be approved by the student's advisor.

### Required Thesis or Alternate Plan Paper

MATH 694 Alternate Plan Paper (1)  
MATH 699 Thesis (3)

**Additional Requirements:** At least half of the credits applied to the program must be earned in 600 level courses excluding thesis or alternate plan paper credits. After completing 16 credits the student must select a three-member examining committee and form a program of study. A student may choose to write an alternate plan paper or thesis. This program requires a comprehensive exam, and an oral defense of the alternate plan paper or thesis.

## MATHEMATICS AND STATISTICS MS

(Thesis Plan - 34 credits)  
(Alternate Plan Paper - 34 credits)

### Statistics Option

Required Core (27-29 credits)

Two of the following four courses (6-8 credits). The remaining two courses shall be treated as deficiencies if they are not part of the student's academic background.

MATH 517 Real Analysis I (3)  
MATH 547 Linear Algebra (3)  
MATH 570 Numerical Analysis (4)  
STAT 555 Theory of Statistics I (4) and  
STAT 550 Regression Analysis (3)  
STAT 551 Experimental Designs (3)  
STAT 556 Theory of Statistics II (4)  
STAT 653 Linear Models (3)  
STAT 680 Topics in Statistics (3)  
STAT 696 Statistical Inference Packages (3)  
MATH 672 Numerical Solutions of Ordinary Differential Equations (2) OR  
MATH 674 Numerical Linear Algebra (2)

### Required Electives (2-6 credits)

500/600 level courses that must be approved by the student's advisor.

### Required Thesis or Alternate Plan Paper

MATH 694 Alternate Plan Paper (1)  
MATH 699 Thesis (3)

**Additional Requirements:** At least half of the credits applied to a program must be earned in 600 level courses excluding thesis or APP credits. After completing 16 credits the student must select a three-member examining committee and form a program of study. A student may choose to write an alternate plan paper or thesis. This program requires a comprehensive exam, and an oral defense of the alternate plan paper or thesis.

**MATHEMATICS EDUCATION MS**

(Thesis Plan - 34 credits)  
(Alternate Plan Paper - 34 credits)

Teaching licensure is a prerequisite to pursuing this degree which is for teachers interested in a graduate program in teaching mathematics. This degree does not lead to initial teaching licensure. Students who desire initial licensure should consult the Master of Arts in Teaching (MAT) program listed in this bulletin.

**Required Core (18 credits)**

- MATH 517 Real Analysis I (3)
- MATH 641 Topics in Modern Abstract Algebra (3)
- MATH 661 Mathematical Problem Solving and Modeling for Teachers (3)
- MATH 662 Algebraic Structures in School Mathematics (3)
- MATH 663 Geometric Structures in School Mathematics (3)
- MATH 690 Research in Mathematics Education (3)

**Required Professional Education Courses (6 credits)**

Any 500/600 level Professional Education courses that must be approved by the student's advisor.

**Required Electives (7-9 credits)**

Any 500/600 level courses must be approved by student's advisor in order to fulfill the total required hours

**Required Thesis or Alternate Plan Paper**

- MATH 694 Alternate Plan Paper (1)
- MATH 699 Thesis (3)

**Additional Requirements:** At least half of the credits applied to a program must be earned in 600 level courses excluding thesis or APP credits. After completing 16 credits the student must select a three-member examining committee and form a program of study. A student may choose to write an alternate plan paper or thesis. This program requires a comprehensive exam, and an oral defense of the alternate plan paper or thesis.

COURSE DESCRIPTIONS

MATHEMATICS

**MATH 511 (4) Introduction to Complex Variables**

Algebra and geometry of complex numbers, analytic functions, power series, Cauchy's theorem and residue theorem.

Prerequisite: MATH 223 and 290

**MATH 517 (3) Real Analysis I**

Limits and continuity, sequences and series, differentiation and integration.

Prerequisite: MATH 223 and 290

**MATH 518 (3) Real Analysis II**

Topology of Euclidean spaces, continuous functions, sequences of functions, and differentiable mappings.

Prerequisite: MATH 417

**MATH 522 (4) Partial Differential Equations**

This course presents the theory, computations, and applications of partial differential equations and Fourier series.

Prerequisite: MATH 223 and 321

**MATH 525 (4) Mathematical Modeling**

This course presents topics from mathematical analysis of both discrete and continuous models taken from problems in the natural sciences, economics, and resource management.

Prerequisite: MATH 223 and 247

**MATH 535 (4) Modern Geometry**

Geometry of spaces including Euclidean and non-Euclidean and applications of contemporary geometry.

Prerequisite: MATH 332 or Con

**MATH 542 (4) Theory of Numbers**

Euclidean algorithm, primes, composites, number theoretic functions, congruences,

Diophantine equations, Euler and Fermat theorems, and algebraic number fields.

Prerequisite: MATH 345

**MATH 546 (4) Abstract Algebra II**

A continuation of MATH 345. The course will include topics from groups, rings, and fields.

Prerequisite: MATH 345

**MATH 547 (3) Linear Algebra II**

An in-depth study of linear operators and their related spaces, dimension, rank, matrix representation of linear operators, special matrices, determinants, eigenvectors, and eigenvalues.

Prerequisite: MATH 345 or Con

**MATH 555 (4) Theory of Statistics I**

A mathematical approach to statistics with derivation of theoretical results and of basic techniques used in applications. Includes probability, continuous probability distributions, multivariate distributions, functions of random variables, central limit theorem, and statistical inference. Same as STAT 555

Prerequisite: MATH 223

**MATH 556 (4) Theory of Statistics II**

A mathematical approach to statistics with derivation of theoretical results and of basic techniques used in applications, including sufficient statistics, additional statistical inference, theory of statistical tests, inferences about normal models, and non-parametric methods. Same as STAT 556.

Prerequisite: MATH/STAT 555

**MATH 570 (4) Numerical Analysis I**

This course provides an introduction to techniques and analysis involved with solving mathematical problems using technology. Topics included are errors in computation, solutions of linear and nonlinear equations, numerical differentiation and integration, and interpolation.

Prerequisite: MATH 122, 247

**MATH 571 (4) Numerical Analysis II**

This course is a continuation of MATH 470. Topics included are the algebraic eigenvalue problem, least-squares approximation, solutions of systems of nonlinear equations, and numerical solutions of ordinary differential equations.

Prerequisite: MATH 470 and 223

**MATH 580 (3) History of Mathematics**

The development of selected topics from before the Hellenistic time period to the late twentieth century. Familiarity with the content of HIST 180 is beneficial.

Prerequisite: MATH 345

**MATH 583 (3) Viewpoint of 5-8 School Mathematics**

**MATH 584 (3) Technology in 5-12 School Mathematics**

This course is designed to inform secondary mathematics teachers about effective utilization of technology in the mathematics curriculum.

Prerequisite: MATH 345 and CI 447

**MATH 588 (1-3) Seminar**

A course of study in which a group of students study a topic by examining results through reports and discussions. May be repeated for credit on each new topic.

**MATH 590 (1-4) Workshop**

A short course devoted to a specific mathematical topic. May be repeated for credit on each new topic.

**MATH 591 (1-4) In-Service**

A course designed to upgrade the qualifications of persons on-the-job. May be repeated on each new topic.

**MATH 595 (1-4) Selected Topics**

A course in an area of mathematics not regularly offered. May be repeated on each new topic.

**MATH 596 (3) Mathematical Logic**

Propositional logic, first and second order logic, completeness, consistency, models of theories, and Godel's Incompleteness theorem.

Prerequisite: MATH 345 and PHIL 411

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## MATHEMATICS

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### **MATH 598 (1-12) Internship**

Provides a student the opportunity to gain expertise and experience in a special field under the supervision of a qualified person.

### **MATH 605 (3) Graphs and Algorithms**

Mathematical concepts of graph theory applied to problems that have algorithmic solutions.

Prerequisite: MATH 417, 375, and 447

### **MATH 606 (3) Topics in Discrete Mathematics**

Can be used for any graduate level discrete mathematics course not offered as a regular course. Distinct offerings may be repeated for credit.

Prerequisite: MATH 375 and 447

### **MATH 608 (1-4) Seminar in Elementary Mathematics**

An opportunity for a group of elementary teachers to study a mutual problem in mathematics.

### **MATH 611 (3) Real Analysis**

Measure theory, integration, metric spaces, and Banach spaces.

Prerequisite: MATH 417

### **MATH 613 (3) Topics in Analysis**

Can be used for any graduate level analysis course not offered as a regular course.

Distinct offerings may be repeated for credit.

Prerequisite: MATH 417, or Con

### **MATH 618 (3) Functional Analysis**

An introduction to the basic concepts and principles of functional analysis. Normed spaces, Banach spaces, Hilbert spaces, and approximation theory are studied.

Prerequisite: MATH 417 and 447

### **MATH 620 (3) Applied Mathematics**

Applications of discrete and continuous mathematics to deterministic problems in the natural sciences, computer science, engineering, and economics. Applied problems will be developed within the mathematical framework of dimensional analysis, asymptotic analysis, perturbation theory, stability, and bifurcation.

Prerequisite: MATH 321, 417, and 447

### **MATH 621 (3) Topics in Applied Mathematics**

Can be used for any graduate level applied mathematics course not offered as a regular course. Distinct offerings may be repeated for credit.

Prerequisite: MATH 417, 422, and 447

### **MATH 625 (3) Complex Variables**

The theory of functions of one complex variable. Complex numbers, contour integration, analytic functions, residues, and power series.

Prerequisite: MATH 417

### **MATH 635 (3) Topics in Geometry**

This course presents selected topics in projective, transformational, and differential geometry.

Prerequisite: Con

### **MATH 641 (3) Abstract Algebra**

A rigorous excursion through some of the topics of abstract algebra which are essential components of the background of a masters level graduate student. Abstract topics include groups, rings, fields, and modules. Concrete applications include properties of the integers, polynomial rings, and the symmetric group.

Prerequisite: MATH 345

### **MATH 645 (3) Topics in Algebra**

This course will cover advanced topics such as (but not limited to) free abelian groups, group rings, noetherian/generalized noetherian rings, coherent/generalized coherent rings, homological algebra, homological dimension theory, representation theory of finite fields, galois theory of equations, field theory, valuation theory, and semigroups.

Prerequisite: MATH 641 or equivalent

### **MATH 661 (3) Mathematical Problem Solving & Modeling for Teachers**

Heuristics in mathematical problem solving and mathematical modeling for teachers.

### **MATH 662 (3) Algebraic Structures in School Mathematics**

Algebraic concepts and procedures interpreted and related from the perspectives of abstract algebra, cognitive research on the learning of algebra, and professional curriculum and instruction programs.

Prerequisite: MATH 345, or Con

### **MATH 663 (3) Geometric Structures in School Mathematics**

The Van Hiele model of the development of geometric thought and recent developments of geometric theory and applications which are related to the school mathematics curriculum.

Prerequisite: MATH 332

### **MATH 672 (2) Numerical Analysis of Differential Equations**

This course is an in-depth study of solving ordinary differential equations numerically. Both Runge-Kutta methods and general multi-step methods are discussed. Error control and step size changing for both stiff and nonstiff equations are analyzed.

Prerequisite: MATH 315 and 470

### **MATH 674 (2) Computations in Linear Algebra**

This course will be an in-depth study of solving linear systems both directly and iteratively and solving the algebraic eigenvalue problem. Applications may also be included.

Prerequisite: MATH 447 and 470

### **MATH 677 (1-4) Individual Study**

Independent individual study under the guidance and direction of a graduate faculty member.

Prerequisite: con

### **MATH 680 (1-4) Topics in Mathematics**

A graduate course in an area of mathematics not regularly offered. May be repeated for credit on each new topic

Prerequisite: will vary with topic

### **MATH 689 (1-3) Readings in Mathematics**

Independent readings in mathematics under the direction of a graduate faculty member.

Prerequisite: con

### **MATH 690 (3) Research in Mathematics Education**

Examination of cognitive theories guiding research in mathematics education; analysis and interpretation of research procedures applied in experimental, qualitative, program evaluation, survey, meta-analysis, theory-generating, and action research studies in mathematics education.

Prerequisite: STAT 550 or 551 or con

### **MATH 691 (1-4) In-Service**

A course designed to upgrade the qualifications of persons on-the-job. May be repeated for credit on each new topic.

### **MATH 692 (3) Topology**

Topological spaces, continuity, product spaces, connectedness, separation, compactness, and metric spaces

Prerequisite: MATH 417

### **MATH 693 (3) Topics in Topology**

Will cover topics at the discretion of the instructor, such as, but not limited to, those in the following list: algebraic topology, homotopy theory, homology theory, differential topology, topological groups, topological vector spaces, categorical topology, catastrophe theory, lie Groups, algebras of continuous functions, and uniform structures.

Prerequisite: MATH 692

### **MATH 694 (1) Alternate Plan Paper**

Research under the supervision of the student's advisor leading to an alternate plan paper.

Prerequisite: con of advisor

### **MATH 695 (1-4) Workshop**

A short course devoted to a specific mathematical topic. May be repeated for credit on each new topic.

**MATH 698 (1-12) Internship**

Provides a student the opportunity to gain expertise and experience in a special field under the supervision of a qualified person.

Prerequisite: con

**MATH 699 (1-4) Thesis**

Research under the supervision of the student's advisor leading to a thesis.

Prerequisite: con of advisor

**STATISTICS****STAT 550 (3) Regression Analysis**

Simple and multiple regression, correlation, analysis of variance and covariance.

Prerequisite: MATH/STAT 354 or 455 or con

**STAT 551 (3) Experimental Designs**

Completely randomized, randomized block, fractional factorial, incomplete block, split-plot, Latin squares, expected mean squares, response surfaces, confounding, fixed effects, and random effects models.

Prerequisite: MATH/STAT 354 or 455 or con

**STAT 555 (4) Theory of Statistics I**

A mathematical approach to statistics with derivation of theoretical results and of basic techniques used in applications. Includes probability, continuous probability distributions, multivariate distributions, functions of random variables, central limit theorem, and statistical inference. Same as MATH 555.

Prerequisite: MATH 223

**STAT 556 (4) Theory of Statistics II**

A mathematical approach to statistics with derivation of theoretical results and of basic techniques used in applications, including sufficient statistics, additional statistical inference, theory of statistical tests, inferences about normal models, and nonparametric methods. Same as MATH 556.

Prerequisite: MATH/STAT 455

**STAT 588 (1-3) Seminar**

The study of a particular topic primarily based upon recent literature. May be repeated for credit on each new topic.

**STAT 591 (1-4) In-Service****STAT 598 (1-12) Internship**

Provides a student the opportunity to gain expertise and experience in a special field under the supervision of a qualified person.

**STAT 653 (3) Linear Models**

Matrix theory, multivariate normal distribution of quadratic forms, estimation and hypothesis testing in the general linear model, and applications of linear models.

Prerequisite: MATH/STAT 455 or con

**STAT 677 (1-4) Individual Study**

Independent individual study under the guidance and direction of a graduate faculty member.

Prerequisite: con

**STAT 680 (1-4) Selected Topics**

A graduate course in a particular area of statistics not regularly offered. May be repeated for credit on each new topic.

Prerequisite: will vary with topic

**STAT 694 (1) Alternate Plan Paper**

Research under the supervision of the student's advisor leading to an alternate plan paper.

Prerequisite: con of advisor

**STAT 696 (3) Statistical Computing**

Statistical package programs used in data collection, transformation, organization, summarization, interpretation and reporting, statistical description and hypothesis testing with statistical inference, interpreting outputs, chi-square, correlation, regression, analysis of variance, nonparametrics, and other designs, accessing and using large files (U.S. Census data, National Health Survey, etc.) Same as COMS 696

Prerequisite: one statistics course

**STAT 698 (1-12) Internship**

Provides a student the opportunity to gain expertise and experience in a special field under the supervision of a qualified person.

Prerequisite: con

**STAT 699 (1-4) Thesis**

Research under the supervision of the student's advisor leading to a thesis. Pre-

requisite: con of advisor

**MODERN LANGUAGES**

*College of Arts and Humanities*

*Department of Modern Languages*

227 Armstrong Hall • 507-389-2116

Web site: [www.mnsu.edu/dept/modernlangWelcome.html](http://www.mnsu.edu/dept/modernlangWelcome.html)

The Department of Modern Languages offers courses to prepare current and future educators pursuing the MAT in second language teaching K-12. These courses are major components of licensure in Spanish, French, German, and TESL. See degree requirements for KSP.

**COURSE DESCRIPTION****MODL 560 (3) Methods of Teaching Modern Languages**

This course is intended to provide prospective secondary school teachers and teachers of modern languages with experience and background to prepare them for teaching modern languages to secondary school students. The course meets state licensure requirements. Major topics include: Second language acquisition and child language development; comprehension-based teaching strategies; standards-based curriculum development and planning; integrating modern languages with the secondary school curriculum; subject content instruction; and teaching and assessing listening, speaking, reading and writing skills.

Prerequisite: Student must demonstrate an oral proficiency level of Intermediate-High on the ACTFL scale or the equivalent in the target language. Contact the department for additional details.

**MODL 561 (1) Applied Modern Language Teaching Methods**

A field experience in a secondary school setting for students earning licensure in modern language teaching. Practicum students work with middle or high school students of French, German, or Spanish. Take concurrently with or following MODL 460.

**MODL 562 (3) Foreign Languages in the Elementary School (FLES) Methods**

Introduction to the theory and practice of modern language teaching for children grades K-6, including oral language development, second language literacy development, content-based language instruction, and techniques for language immersion programs. This course meets state licensure requirements.

Prerequisite: Student must demonstrate an oral proficiency level of Intermediate-Mid on the ACTFL scale or the equivalent in the target language. For information contact the department.

**MODL 563 (1) Applied FLES Methods**

A field experience in an elementary setting for students earning licensure in modern language teaching. Practicum students work with elementary school students in French, German, or Spanish. Take concurrently with or following MODL 562.

**MODL 565 (1-3) Workshop in Modern Language Education**

Topics in modern language education. May be repeated for credit.

**MODL 570 (4) Theory and Methods in TESL I**

Introduction to theories of second language acquisition in children, description of program models for second language literacy and academic success. Discusses oral language development, literacy, content-based instruction, testing, and placement of LEP children.

**MODL 571 (4) Theory and Methods in TESL II**

Introduction to theories of second language acquisition and language processing in adults. Topics include the skills of listening, speaking, reading, writing,

## MUSIC

and vocabulary use for university student and adult education. Consideration of individual and sociocultural factors in language learning.

### MODL 573 (2) Policies and Programs in ESL

This course describes state and federal legislation affecting ESL; identification, assessment, placement, and tracking of English Language Learners in the K-12 context; current models of ESL program delivery; and Minnesota State Standards and standardized testing.

### MODL 575 (1-4) Topics in TESL

Topics in learning and teaching English as a Second/Foreign Language. May be repeated for credit.

### MODL 662 (1-4) Special Topics in TESL

Advanced seminar topics in learning and teaching ESL/EFL. May be repeated for credit.

### MODL 672 (1) Teaching English as a Second Language Practicum

### MODL 677 (1-4) Individual Study

Special topics in language education. May be repeated for credit.

### MODL 694 (1-2) Alternate Plan Paper

Research and writing for the alternate plan paper.

### MODL 697 (4-6) Internship: Community College Teaching

Classroom experience in post-secondary teaching.

## MUSIC MM

### MUSIC EDUCATION MM

(DISCIPLINE-BASED)

College of Arts & Humanities

Department of Music

202 Performing Arts Center • 507-389-2118

Music graduate studies at Minnesota State University lead to the Master of Music degree. The Master of Music degree is a professional degree, most appropriate for students who desire to increase their knowledge as public school teachers, to teach at the college level, or to work toward their doctorate. It is also a degree useful for those who perform professionally, compose, or conduct.

**Master of Music.** The Master of Music is offered in three areas of concentration: Performance (instrumental, keyboard, or voice), Conducting (Choral or Wind Band) and Music Education. A student may pursue a secondary emphasis in any of the above areas or in music history/theory.

In addition to meeting the general admission requirements of the College of Graduate Studies and Research, all prospective graduate students in music are expected to have the equivalent of an undergraduate degree with a music major from an accredited institution. Competency based music tests must be passed before a Plan of Study can be approved. Written and oral comprehensive examinations are required for graduation. The student may present as his/her independent study project a Master's recital or a thesis, depending on area of specialization. The Thesis Plan requires 30 credits which allows up to 3 credits outside of music. The Alternate Plan Paper requires 30 credits and two starred papers in place of the Thesis.

Music 600 is required for all majors and should be completed early in the program. Students planning to major in performance must audition before the appropriate music faculty prior to entrance into the program; performance majors should be full-time students. Specific information regarding entrance tests as well as outlines of the requirements for both programs may be found in the graduate music handbook available from the Department of Music. Graduate assistantships are available which provide a stipend and a tuition waiver. To apply for a music assistantship, students should contact Dr. David Dickau, graduate music coordinator.

## MUSIC MM

(All options - 30 credits)

Choose one of the following Options:

### Keyboard (30 credits)

MUS	600	Introduction to Graduate Music Study (3)
MUS	601	Ensemble Practicum (2)
MUS	661	Private Piano (12)
MUS	676	Applied Music Literature (3)
MUS	677	Applied Music Pedagogy (2)
MUS	696	Recital (2)
MUS		Music History (3)
MUS		Music Theory (3)

### Voice (31 credits)

MUS	555	Diction for Singers (2)
MUS	600	Introduction to Graduate Music Study (3)
MUS	601	Ensemble Practicum (2)
MUS	651	Private Voice (12)
MUS	676	Applied Music Literature (2)
MSU	677	Applied Music Pedagogy (2)
MUS	696	Recital (2)
MUS		Music History (3)
MUS		Music Theory (3)

*Language: Must take at undergraduate level if necessary; credits do not count for degree*

### Instrument (30 credits)

MUS	600	Introduction to Graduate Music (3)
MUS	601	Ensemble Practicum (2)
MUS	672	Private Instrument (Major Instrument) (12)
MUS	676	Applied Music Literature (3)
MUS	677	Applied Music Pedagogy (2)
MUS	696	Recital (2)
MUS		Music History (3)
MUS		Music Theory (3)

### Choral Conducting

MUS	5xx	Music History (3)
MUS	5xx	Music Theory (3)
MUS	509	Advanced Choral Conducting (3)
MUS	600	Introduction to Graduate Music Study (3)
MUS	601	Ensemble Practicum (1, 1) (2)
MUS	607	Seminar in Choral Conducting (3)
MUS	608	Choral Literature (3)
MUS	609	Private Choral Conducting (1-3)
MUS	696	Recital (2)

### Music electives (4)

#### Wind Band Conducting

MUS	5xx	Music History (3)
MUS	534	Form and Analysis (3)
MUS	600	Introduction to Graduate Music Study (3)
MUS	601	Ensemble Practicum (1, 1) (2)
MUS	617	Seminar in Wind Band Conducting (4)
MUS	618	Wind Band Literature (2)
MUS	619	Private Instruction in Conducting (4)
MUS	696	Recital (2)
MUS		Music electives (5)

## MUSIC EDUCATION MM

(Discipline-Based)

Teaching licensure is a prerequisite to pursuing this degree which is for teachers interested in enrichment in a teaching area. This degree does not lead to initial teaching licensure. Students who desire initial licensure should consult the Master of Arts in Teaching (MAT) program. An emphasis in Music is available. Please see the section concerning the MAT program that is listed in this bulletin.

### Required Core (15 credits)

MUS	600	Introduction to Graduate Music (3)
MUS	604	Survey of Music Research (3)

MUS 642 Topics in Music Education (3)  
 MUS 699 Thesis (3)  
 EDFN (Course in College of Education) (3)  
 \*Related Courses (9 credits)  
 (must include at least one course in theory and one in history)

### General Courses (6 credits)

These may be in related fields in any college of university and must be approved by the graduate coordinator.

### Alternate Plan

The alternate plan requires 34 credits of coursework. The thesis is replaced with two starred papers (see the graduate music coordinator for explanation), each of which is based on further research in courses taken. The following credits are required:

### Required Core: (34 credits)

MUS 600, 604, 642 (no thesis) (9)  
 at least one course in Education (3)  
 Related Music Courses (16)  
 Electives (6)

## COURSE DESCRIPTIONS

### MUS 509 (3) Advanced Choral Conducting

Choral conducting skills for the advanced conductor.

### MUS 519 (3) Advanced Conducting

Conducting skills for the advanced conductor.

### MUS 522 (3) Music of the Renaissance

A survey of important music literature of the 14th through the 16th century with emphasis upon the cultural, economical and philosophical forces which shaped the musical trends and influenced the composer and his compositions.

### MUS 523 (3) Music of the Baroque Era

A study of the composers and their literature which represented the changing styles as dictated by the musical tastes of the period. Special attention is given the evolution and/or development of the major musical forms and genres.

### MUS 524 (3) Music of the Classic Period

A study in detail of the development of musical forms and style of the 18th century, the important composers of this period, the society in which they lived and how it affected their lives and works.

### MUS 525 (3) Music of the 19th Century

A study of the dominant and varied musical energies of the 19th century as seen through the study of scores and the music of its composers.

### MUS 526 (3) Music of the Modern Era

This course presents the major composers of the 20th century and representative musical compositions. Beginning with Mahler and Debussy, other composers include Stravinsky, Bartok, Schoenberg, Berg, Copland, Crumb, and Messiaen. Included are reading and writing assignments; students should plan to spend part of each week listening to assigned materials in the music library.

### MUS 527 (3) Music Theatre

This team-taught course will acquaint students with the problems of presenting musical drama. Course content will include preparation and presentation of musical scenes. Several aspects of musical theatre will be discussed, including history, directing, acting, conducting, singing, and producing.

### MUS 532 (3) Contemporary Theory

A study of 20th century compositional practices through the analysis of representative works of Stravinsky, Bartok, Schoenberg, Penderecki, and others. Some writing exemplifying specific techniques.

### MUS 533 (3) Contrapuntal Techniques

Writing and analysis stressing the linear approach to composition, motivic development, and the imitation process. The invention, Fugue, and Chorale Prelude are examined.

### MUS 534 (3) Form and Analysis

An examination of principles and patterns of musical design in representative works,

principally from the Baroque, Classic and Romantic composers. The acquisition of analytical techniques which can be broadly applied.

### MUS 535 (3) Orchestration

Arranging music for the school band and orchestra.

### MUS 536 (3) Choral Arranging

Arranging music for choral ensembles.

### MUS 541 (2) Music in Early Childhood

This course is designed to answer some of the questions concerning how young children learn music and how music can become a foundation for learning in all curricular areas. Prominent learning theories, child growth and development characteristics and effects of home/school environment will be discussed in relation to music experiences. Musical methodologies and materials will be encouraged.

### MUS 555 (2) Diction for Singers

Application of the International Phonetic Alphabet to song texts in English, French, Italian, and German.

### MUS 559 (2) The Art Song

This course deals with the art song as distinguished from the native song. It deals with song from the point of literary value and musical substance, and it seeks to give an overview of the art song from the Middle Ages to the present day, with emphasis given to works of the 19th and 20th centuries.

### MUS 579 (2) Instrument Repair and Maintenance

Through a series of laboratory projects and lecture/demonstration, the course is designed to train students in the expertise of performing minor repairs to all band instruments as well as to be knowledgeable in the aspects of preventive maintenance.

### MUS 581 (2) Advanced MIDI Production

### MUS 594 (1-6) Workshop

Special short course, usually available during summer sessions I and II.

### MUS 597 (1-16) Internship

### MUS 600 (3) Introduction to Graduate Music Study

The study of library sources and research procedures involved in locating music literature and materials for use in performance, teaching and/or advanced graduated studies.

### MUS 601 (1-4) Ensemble Practicum

Participation in any regularly scheduled ensemble at the Department of Music. May be repeated for credit.

### MUS 607 (1-3) Seminar in Choral Conducting

An intensive study of choral conducting techniques and performance practices.

### MUS 608 (3) Choral Literature

An intensive survey of choral repertory.

### MUS 609 (1-3) Private Choral Conducting

A course designed for choral conductors that continues the development of analytical and physical conducting skills. May be repeated for credit.

### MUS 617 (1) Seminar in Wind Band Conducting

An intensive study of wind band conducting technique and performance practice.

### MUS 618 (2) Wind Band Literature

An intensive study of repertory designed for wind band conductors.

### MUS 619 (1-4) Private Wind Band Conducting

Course designed for wind band conductors that continues the development of analytical and physical conducting skills. Course may be repeated.

### MUS 630 (1-6) Individual Study

Independent work by graduate students comes under this course number. The student must first secure permission from the instructor desired for the individual study.

### MUS 631 (1-3) Composition

Private lessons in music composition.

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## MUSIC

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### MUS 641 (3) Survey of Research in Music Education

An overview of current research practices and techniques. Potential research areas are investigated and developed.

### MUS 642 (3) Topics in Music Education

An investigation of the current topics of concern to the music educator. Individual student reports on current trends and problems in music education. The course includes issues in music administration.

### MUS 651 (1-3) Private Voice

Individual lessons: two credits for half hour lesson each week and four credits for one hour lesson each week.

### MUS 661 (1-3) Private Piano

### MUS 662 (1-3) Private Harpsichord

### MUS 665 (1-3) Private Organ

### MUS 671 (1-3) Private Brass Instruments

### MUS 672 (1-3) Private Reed and Other Instruments

### MUS 673 (1-3) Private String Instruments

### MUS 674 (1-3) Private Percussion

### MUS 675 (1-3) Private Classical Guitar

### MUS 676 (1-4) Applied Music Literature

### MUS 677 (1-4) Applied Music Pedagogy

### MUS 678 (1-3) Private Instrument

Individual lessons: two credits for half hour lesson each week and four credits for one hour lesson each week.

### MUS 685 (1-4) Selected Topics

### MUS 694 (1-2) Alternate Plan Paper Research

### MUS 696 (2) Recital

### MUS 698 (1-8) Internship

This course is available for students who are interested in assisting faculty in teaching and other academic pursuits. Permission of a faculty member is required before registering for this course.

### MUS 699 (3-6) Thesis

Music students who write a thesis for their terminal project can register for this course. A faculty advisor must be selected before approval will be given.

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## NONPROFIT LEADERSHIP GRADUATE CERTIFICATE

The graduate nonprofit leadership certificate is a cooperative educational program between the College of Social and Behavioral Science and the College of Allied Health and Nursing. This 1.5-credit graduate certificate is specifically designed to respond to the employment needs and opportunities within one of the fastest growing sectors of the economy. The nonprofit leadership certificate is a multidisciplinary program for graduate students and nonprofit practitioners interested in gaining knowledge and skills for success and advancement in nonprofit leadership.

**Admission.** Students must meet the admission requirements of the College of Graduate Studies and Research.

### Curriculum

NPL 673 Survey of Nonprofit Leadership and Management (3)

### Program Planning and Evaluation

URBS 513 Urban Program Evaluation (3) OR  
SOC 566 Program Planning (3) OR  
WOST 600 Collective Action (3)

### Program Administration

RPLS 573 Administration of Leisure Time Programs (3) OR  
SOC 517 Program Administration (3)

### Financial Management and Development

URBS 553 Grants Administration (3) OR  
RPLS 565 Event Management (3)

The student is required to also complete a three credit internship in a qualifying nonprofit organization through one of the sponsoring departments (SOC 695, SOC 697, CORR 698, SOVK 697, RPLS 697, URBS 697, or WOST 698).

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## NURSING

### College of Allied Health & Nursing

#### School of Nursing

360 Wissink Hall • 507-389-6826

or 800-627-3529 (MRS/TTY)

Fax: 507-389-6516

<http://ahn.mnsu.edu/nursing/>

The FNP and CNS Programs are designed to prepare professional nurses for advanced practice and lead to a Master of Science in Nursing (MSN) degree. The MS NE Program is designed to prepare professional nurses for advanced nursing practice as educators in academic or clinical settings. Post-master's nursing degree certificates are also available in all three programs.

The graduate programs build upon and extend the body of knowledge and competencies of baccalaureate education in nursing. Graduate study in the School of Nursing educates nurses by creating an academic environment that fosters scholarship, critical thinking, and creativity. Graduate courses include theoretical and clinical experiences that provide the opportunity to develop knowledge and skills necessary to assume the role of an advanced practice nurse or a nurse educator. Graduates are also prepared for doctoral study.

Graduate Faculty has expertise in various nursing specialties and engages in clinical practice and/or research projects.

**Admission.** The potential applicant requests an application packet from the administrative assistant for the Graduate Programs in Nursing. Completed applications are due in to the Graduate Programs Office in the School of Nursing by January 15th for the Spring admission cycle, and by September 15th for the Fall admission cycle. Applicants submit materials simultaneously to both the College of Graduate Studies and Research and to the School of Nursing.

### Submit to the College of Graduate Studies and Research the following:

1. Completed application form to Minnesota State Mankato.
2. Application fee (fee applies to Minnesota State Mankato students, graduates, faculty and staff).
3. Verification of baccalaureate degree from an accredited college or university (official transcript).
4. Verification of Graduate Record Examination (GRE) scores is required for applicants with cumulative GPA less than 3.0 OR completion of the Graduate Writing Essay (administered by the Graduate Program Coordinator in the School of Nursing).
5. Information required of international students, if appropriate.

### Submit to the School of Nursing the following:

1. Completed Graduate Program, SON application form.
2. Copy of current registration of RN licensure.
3. Verification of references requested.

### Completed applications are reviewed by the Graduate Program Admission Committee using the following criteria:

1. BS/BA degree from an NLNAC/CCNE accredited school of nursing preferred (as verified by official transcripts). Baccalaureate degree in another field is acceptable with equivalency demonstrated in leadership/management, research, and public health nursing theory and clinical.
2. Current RN licensure in at least one state with eligibility for licensure in Minnesota.
3. Undergraduate cumulative grade point average (GPA) of 3.0 or greater on a 4.0 scale. If cumulative GPA is less than 3.0, the Graduate Record

Exam (GRE) is required. The GRE results must be submitted along with the application. The GRE must have been taken within five years prior to application. An on-campus written essay may be substituted for the GRE. The written essay is an applicant's response to a topic related to nursing and is evaluated for composition and fluency. This essay is written prior to January 15th and is scored by two members of the graduate faculty. The faculty essay score is submitted along with the application. Students choosing this option should contact the Graduate Program Director for on-campus essay writing dates. Upon successful completion of this essay and fulfillment of other admission requirements, the applicant might be provisionally admitted to enroll in nursing science core courses. When the student has completed 8 credits from the nursing science core courses with a minimum grade of B in each course, the student is fully admitted to a graduate program.

4. Minimum of one year of clinical nursing practice experience as an RN.
5. Submission of a completed Graduate Nursing Programs Application, including goal statement and professional history/activities (addressing all categories as requested on the form).
6. References from three persons, including current employer, and two other persons of the applicant's choice (three reference forms are included in the Graduate Nursing Programs Application Packet).
7. Validation of computer competence (or plan to accomplish prior to enrollment).

*An interview may also be required as part of the application process. Applicants are notified of the admission decision by March 15th (Spring application cycle) or by November 15th (Fall cycle).*

**Curriculum.** The MSN curriculum is designed to build upon and extend the body of knowledge and competencies of baccalaureate education in nursing. The overall purpose of the master's program is to provide high quality graduate education for advanced practice nursing. The curriculum focuses on the systematic integration of knowledge, theory, and skills for advanced practice nursing with families and for leadership in health care systems and the nursing profession.

### Curriculum Components

The graduate curricular model is comprised of three components: 1) nursing science; 2) advanced practice; and 3) supportive fields. Full time and part time study is possible in all programs.

#### I. Nursing Science Component Courses

NURS 601	Theoretical Foundations of Nursing (3) ^
NURS 602	Ethical Dimensions of Nursing (2) ^
NURS 604	Knowledge Development and Utilization (3) ^
NURS 640	Family Nursing (2)
NURS 620	Processes Influencing the Human Health Experience (3)
NURS 621	Human Health Experiences (3)
NURS 622	Nursing Actions (3)
NURS 699	Thesis (3-4)

#### II. Advanced Practice Component Courses

NURS 603	Advanced Practice Roles (3) ^
NURS 606	Social Space of Nursing (2) ^
NURS 636	Teaching in a Practice Discipline I (3)
NURS 637	Practicum in Didactic Teaching (3)
NURS 638	Teaching in a Practice Discipline II (3)
NURS 639	Practicum in Clinical Teaching (3)
NURS 641	Adult and Older Adult Health I (2)
NURS 642	Child and Adolescent Health (2)
NURS 643	Reproductive Health (2)
NURS 644	Adult and Older Adult Health II (2)
NURS 645	Advanced Practice I FNP (4)
NURS 646	Advanced Practice II FNP (4)
NURS 647	Advanced Practice III FNP (4)
NURS 660	Organizational and Systems Leadership (3)
NURS 661	Advanced Practice I CNS (3)
NURS 648	Advanced Practice II CNS (3)
NURS 649	Advanced Practice III CNS (3)

#### III. Supportive Fields Courses

HLTH 575	Biostatistics (or equivalent) (3)
KSP 676	Adult Development and Learning (3)
KSP 677	Curriculum Design, Assessment and Evaluation (3)
NURS 552	Advanced Health Assessment (3)
NURS 553	Advanced Pharmacology (3) ^
NURS 554	Advanced Pathophysiology (3) ^

^ Courses which are available to non-degree seeking students.

**Capstone Experience.** All students complete the graduate thesis (NURS 699) and a final clinical in all programs as measures of Curriculum Outcome achievement.

**Outcomes.** Upon completion of the program, students will be able to:

1. Synthesize theories and concepts from nursing and other disciplines for application in advanced practice nursing.
2. Use a process of scholarly inquiry in advanced practice nursing.
3. Apply the principles of ethical decision making in advanced practice nursing.
4. Demonstrate competence in advanced practice nursing with selected community-based client populations.
5. Assume responsibility for contributing to improvement of the delivery of health care and influencing health policy.
6. Provide leadership for ongoing development of the nursing profession.

**Progression.** All students must complete a graduate program within six years of taking the first course that applies to the nursing science major. Students may progress either full time (8-11 credits per semester) or part time (2-7 credits per semester). Full time students may complete their program of study in four semesters and two summers. Completion of a graduate nursing program in two calendar years requires intensive study and may not be feasible for some students.

**Non-degree Status.** Nursing science core courses are open to non-degree seeking students on a space available basis by permission of the professor and the Graduate Programs Coordinator. Interested students apply for non-degree status through the College of Graduate Studies and Research. After obtaining non-degree seeking status, a graduate student must contact the Graduate Programs Coordinator of the School of Nursing before registering for a class.

**Accreditation.** Guidelines provided by the National League for Nursing Accrediting Commission (NLNAC), the Commission on Collegiate Nursing Education (CCNE), the American Association of Colleges of Nursing (AACN), the National Organization of Nurse Practitioner Faculties (NONPF), the National Association of Clinical Nurse Specialists (NACNS), the National League for Nursing (NLN) and the American Nurses' Association Credentialing Center (ANCC), have been utilized in program development. The Graduate programs are accredited by CCNE.

**Financial Assistance.** Minnesota State University, Mankato offers numerous sources of financial assistance. Graduate assistantships provide part-time, academically-related employment to eligible graduate students. These carry stipends up to \$9,000, with maximum of nine credits per semester of resident graduate tuition, and resident rates for nonresident students. Federal Nurse Education Traineeships are available to students who commit to completing at least 6 credits each semester of the academic year. The award amount is determined by the amount of funding received annually. Other funding is available through national, state and local public and private sources.

**Transfer Credit.** A maximum of ten semester hours of graduate credit, all of which must be related to the program (with a grade of "B" or better), may be transferred from other appropriately accredited colleges or universities. With adequate pre-planning, a maximum of 16 semester hours of appropriate graduate credit may be transferred from other Minnesota State Universities (Bemidji, Metropolitan, Moorhead, Southwest, St. Cloud, Winona) and applied to a program at Minnesota State Mankato.

### MASTER OF SCIENCE (MAJOR IN NURSING): NURSE EDUCATOR

The Nurse Educator (NE) Master's program and Post-Master's Certificate program are dedicated to developing nurse educators who advance nursing clinical practice, education and research in academic and practice settings. Graduates are eligible for national certification as academic nurse educators through the National League for Nursing. The MS is the minimum degree of preparation appropriate for the clinical nursing faculty member in academic and practice settings.

The NE MS Program consists of:

#### Nursing Science Component (23 credits)

NURS 601	Theoretical Foundations of Nursing (3)
NURS 602	Ethical Dimensions of Nursing (2)
NURS 604	Knowledge Development in Nursing (3)
NURS 620	Processes Influencing the Human Health Experience (3)
NURS 621	Human Health Experiences (3)
NURS 622	Nursing Actions (3)
NURS 640	Family Nursing (2)
NURS 699	Thesis (4)

#### Advanced Practice Component (17 credits)

NURS 603	Advanced Practice Roles (3)
NURS 606	Social Space of Nursing (2)
NURS 636*	Teaching in a Practice Discipline I (3)

## NURSING

NURS 637*	Practicum in Didactic Teaching (3)
NURS 638*	Teaching in a Practice Discipline II (3)
NURS 639*	Practicum in Clinical Teaching (3)

### Supportive Fields Component (11 credits)

HLTH 575	Biostatistics (or equivalent) (3)
KSP 676*	Adult Development and Learning (4)
KSP 678*	Curriculum Design, Assessment and Evaluation (4)

Total Credits: 51 (360 clinical hours)

\*Courses marked with an asterisk are included in the Post-Master's Nursing Certificate Program: Nurse Educator. Students completing this certificate option will have completed the following graduate courses in their original nursing master's program or the equivalent prior to admission or during the course of study at Minnesota State Mankato:

NURS 601	Theoretical Foundations of Nursing (3)
NURS 602	Ethical Dimensions of Nursing (2)
NURS 603	Advanced Practice Roles (3)
NURS 604	Knowledge Development in Nursing (3)
NURS 620	Processes Influencing the Human Health Experience (3)
NURS 621	Human Health Experiences (3)
NURS 622	Nursing Actions (3)
NURS 640	Family Nursing (2)
NURS 699	Thesis (4)

### MASTER OF SCIENCE IN NURSING: CLINICAL NURSE SPECIALIST

The Clinical Nurse Specialist (CNS) program and Post-Master's Certificate program prepare nurses to effectively influence the health outcomes of patients and clients, the practice of nursing personnel, and patient care processes and client population outcomes in the health care organization or network.

The CNS program consists of:

#### Nursing Science Component (16 credits)

NURS 601	Theoretical Foundations of Nursing (3)
NURS 602	Ethical Dimensions of Nursing (2)
NURS 604	Knowledge Development in Nursing (3)
NURS 620*	Processes Influencing the Health Experience (3)
NURS 640*	Family Nursing (2)
NURS 699	Thesis (3)

#### Advanced Practice Component (19–21 credits)

NURS 603	Advanced Practice Roles (3)
NURS 606	Social Space of Nursing (2)
NURS 660*	Organizational and Systems Leadership (3)
NURS 661*	Advanced Practice I CNS (3)
NURS 648*	Advanced Practice II CNS (3)
NURS 649*	Advanced Practice III CNS (3)

Choice of either NURS 641\*(2), NURS 642\*(2), NURS 643\*(2), or NURS 644\*(2)

#### Supportive Fields Component (12 credits)

HLTH 575	Biostatistics (or equivalent) (3)
NURS 552*	Advanced Health Assessment (3)
NURS 553*	Advanced Pharmacology (3)
NURS 554*	Advanced Pathophysiology (3)

Total Credits: 47–49 (600 clinical hours)

The Post-Master's Nursing Certificate: Clinical Nurse Specialist program provides nurses that already have a master's degree in another area of nursing the opportunity to complete courses necessary to seek national certification and practice as a clinical nurse specialist.

\*Courses marked with an asterisk above are included in the post-master's certificate program. Students successfully completing the Post-Master's Nursing CNS Certificate are expected to have completed the following graduate courses in their original nursing master's program or the equivalent prior to admission or during their course of study at Minnesota State Mankato:

#### A graduate level statistics course plus

NURS 601	Theoretical Foundations of Nursing (3)
NURS 602	Ethical Dimensions of Nursing (3)
NURS 603	Advanced Practice Roles (3)
NURS 604	Knowledge Development and Utilization (3)
NURS 606	Social Space of Nursing (2)
NURS 699	Thesis (4)

### MASTER OF SCIENCE IN NURSING: FAMILY NURSE PRACTITIONER

The Family Nurse Practitioner (FNP) program and Post-Master's Certificate program are dedicated to developing FNPs who advance nursing clinical practice, education and research in practice settings. Graduates are eligible for national certification as family nurse practitioners and are prepared to practice in acute care and community settings with a focus on primary care of individuals across the life span and their families.

The FNP Program consists of:

#### Nursing Science Component (16 credits)

NURS 601	Theoretical Foundations for Nursing (3)
NURS 602	Ethical Dimensions of Nursing (2)
NURS 604	Knowledge Development in Nursing (3)
NURS 620	Processes Influencing the Human Health Experience (3)
NURS 640*	Family Nursing (2)
NURS 699	Thesis (3)

#### Advanced Practice Component (25 credits)

NURS 603	Advanced Practice Roles (3)
NURS 606	Social Space of Nursing (2)
NURS 641*	Adult and Older Adult Health I (2)
NURS 642*	Child and Adolescent Health (2)
NURS 643*	Reproductive Health (2)
NURS 644*	Adult and Older Adult Health II (2)
NURS 645*	Advanced Practice I FNP (4)
NURS 646*	Advanced Practice II FNP (4)
NURS 647*	Advanced Practice III FNP (4)

#### Supportive Fields Component (12 credits)

HLTH 575	Biostatistics (or equivalent) (3)
NURS 552*	Advanced Health Assessment (3)
NURS 553*	Advanced Pharmacology (3)
NURS 554*	Advanced Pathophysiology (3)

Total Credits: 53 (600 clinical hours)

The Post-Master's Family Nurse Practitioner Certificate program provides nurses that already have master's degree preparation in another area of nursing the opportunity to complete courses necessary to seek national certification and practice as a family nurse practitioner.

\*Courses marked with an asterisk above are included in the certificate program. Students completing the Post-Master's Nursing FNP Certificate program are also expected to have completed the following graduate courses in their original nursing master's program or the equivalent prior to admission or during their course of study at Minnesota State Mankato:

#### A graduate level statistics course plus

NURS 601	Theoretical Foundations of Nursing (3)
NURS 602	Ethical Dimensions of Nursing (3)
NURS 603	Advanced Practice Roles (3)
NURS 604	Knowledge Development and Utilization (3)
NURS 606	Social Space of Nursing (2)
NURS 620	Processes Influencing the Health Experience (3)
NURS 699	Thesis (4)

### DOCTOR OF NURSING PRACTICE (DNP)

The DNP is offered as a collaborative program through a Consortium of four universities: Minnesota State University, Mankato; Minnesota State University Moorhead; Winona State University; and Metropolitan State University. This program is for nurses with a master's degree in nursing who wish to gain the advanced clinical, organizational, economic, and leadership competencies necessary in an increasingly complex healthcare environment.

Graduates of Minnesota State University, Mankato's DNP program will be able to influence health care by:

- Providing leadership on the front lines of their profession.
- Evaluating clinical outcomes more effectively through the use of evidence-based practice tools.
- Identifying and managing the health care needs of special populations.
- Using technology and information to transform health care systems.

Candidates for the DNP program hold a master's degree in nursing. They may currently serve in advanced nursing positions including those of nurse executive, nurse informatician, nurse educator, clinical nurse specialist, nurse midwife, nurse anesthetist and nurse practitioner.

**Admission.** Applicants will indicate their preference for one of the four Consortium universities to be their “home institution”. Efforts will be made to place students at their first-choice university. Students from all four universities will progress together as a cohort.

**Curriculum.** The DNP curriculum is structured around the American Association of Colleges of Nursing (AACN) Essentials of Doctoral Education. Course content builds upon the master’s degree and consists of a minimum of 36 credits. Five semesters of doctoral didactic and clinical coursework culminates in completion of an evidence-based clinical capstone project. Throughout the course sequence, students will work with clinical experts and graduate faculty with expertise in applied research. A variety of teaching and learning approaches, primarily distance-learning modalities, are used.

## COURSE DESCRIPTIONS

### NURS 552 (3) Advanced Health Assessment

This course offers theoretical and simulated clinical practice to develop advanced skills in health and physical assessment throughout the life span. Students complete a client data base and identify nursing problems necessary in making clinical judgments and planning and caring for the health care needs of individual clients.

### NURS 553 (3) Advanced Pharmacology for Advanced Practice Nursing

Analysis of core decision making-processes used by advanced practice nurses to select drugs and clinical case management concepts involved in monitoring persons using prescribed drugs are addressed. Principles of altered pharmacodynamics, legal, economic and ethical considerations for nurse prescribers are explored. Prerequisite or Co-requisite: Basic understanding of pathophysiology, physical assessment, pharmacology, and pharmacokinetics

### NURS 554 (3) Advanced Pathophysiology

This course provides a foundation in advanced physiology and pathophysiology at the cellular, organic and systemic level. This foundation serves as a basis for clinical assessment and management by advanced practice nurses. Key concepts and integration of function among systems are emphasized. The impact of psychosocial variables on physiologic function is explored.

### NURS 590 (1–3) Workshop

Workshop(s) with various topics and titles.

### NURS 601 (3) Theoretical Foundations of Nursing

Theoretical formulations that inform nursing practice are examined and evaluated. Paradigmatic perspectives and their relationships with models of practice are explored. Selected concepts and middle-range theories are analyzed and their implications for practice are discussed.

### NURS 602 (2) Ethical Dimensions of Nursing

The ethics of caring, social justice, and advocacy within the nurse-client relationship are evaluated. Emphasis is on inquiry into ethical ways of knowing and practicing in nursing. Ethical issues in contemporary nursing are analyzed.

### NURS 603 (3) Advanced Practice Roles

Core aspects of advanced practice nursing are investigated. Emphasis is on analyzing the competencies, roles and issues facing advanced practice nurses. Students explore negotiation of advanced practice roles within practice and academic milieus.

### NURS 604 (3) Knowledge Development in Nursing

The role of research and its application, utilization and integration in nursing practice is examined. Research approaches, designs and methods are analyzed. Emphasis is placed on development of analytic skills for reading and applying research in advanced practice roles. Prerequisite: NURS 601; graduate-level statistics course

### NURS 605 (2) Health Policy & Nursing

The purpose of this course is for students to appreciate the impact of public policy and legislation on health care systems and the leadership role of advanced practice nurses in shaping health policy and legislation supportive of health in the United States of America.

### NURS 606 (2) Social Space of Nursing

The influences of social, economic, political, cultural, organizational and interpersonal milieus on nursing are examined. Prerequisite: NURS 601 or permission of instructor

### NURS 610 (2) Foundation & Philosophy of Holism & Healing

### NURS 611 (2) Integrative Health I: Mind, Body, Spirit

### NURS 612 (2) Integrative Health II: Mind, Body, Spirit

### NURS 613 (2) Integrative Health Domain: Mind

### NURS 614 (2) Integrative Health Domain: Body

### NURS 615 (2) Integrative Health Domain: Spirit

### NURS 620 (3) Processes Influencing the Human Health Experience

Middle-range theories that describe and explain the development of health-related behaviors are analyzed. Focus is on how multiple environments influence the development of health-related perceptions and behaviors of individuals, families and groups.

Prerequisite: NURS 601; Co-requisite: NURS 604, 640, or permission of instructor

### NURS 621 (3) Human Health Experiences

Affective, cognitive, physical, and social experiences of persons, families, and groups are explored. Focus is on middle-range theories that describe and explain common phenomena of concern to nursing.

Prerequisite: NURS 620 or permission of instructor

### NURS 622 (3) Nursing Actions

Middle-range theories that prescribe nursing actions to facilitate health throughout the life span are analyzed. Emphasis is on intervention models and modalities used with persons, families, and groups.

Prerequisite: NURS 621 or permission of instructor

### NURS 631 (2–5) Advanced Practice: Clinical Teaching

Provides a focus on educational needs of nursing students as well as family clients. Classroom and clinical teaching experiences provide mentored practice in development and application of learning assessments, teaching strategies, and evaluation measures.

Prerequisite: core courses, NURS 603, or permission of faculty

### NURS 632 (2–5) Advanced Practice: Clinical Management

Students have the opportunity to focus on leadership/management issues and strategies related to clinical practice, as well as cost-effective delivery of client care in today’s and tomorrow’s health care system. Students will establish a mentor relationship with an experienced nurse manager or administrator.

Prerequisite: one or two leadership/management courses of the student’s choice, NURS 603, permission of faculty

### NURS 636 (3) Teaching in a Practice Discipline I

The practice of teaching in the context of nursing education is analyzed, with a focus on teaching-learning pedagogies, curriculum development and evaluation.

Prerequisite: NURS 621 or permission of instructor

### NURS 637 (3) Practicum in Didactic Teaching

Guided experience in the practice of teaching nursing in structured settings. Focus is on implementation of effective, innovative, learner-centered pedagogies and on cultivation of the educator role in field experiences and seminars. (180 hours: 15 hours seminar + 120 clinical hours)

Prerequisite or Co-requisite: NURS 636

### NURS 638 (3) Teaching in a Practice Discipline II

Course emphasis is on approaches to teaching and learning, assessment, and evaluation of students in the clinical setting. Roles and responsibilities of nurse educators within a clinical setting are examined.

### NURS 639 (3) Practicum in Clinical Teaching

Guided experience in the practice of teaching nursing in clinical settings. Teaching strategies appropriate to clinical content, teacher attributes and desired learner outcomes are emphasized in field experiences and seminars.

Prerequisite or Co-requisite: NURS 638

### NURS 640 (2) Family Nursing

Family nursing models and middle-range theories are analyzed and their implications for practice models are discussed. Approaches to assessment of family

as context and family as a unit of care are analyzed. Family–nurse interpersonal processes are explored.

Prerequisite or Co–requisite: NURS 601 or permission of instructor

**NURS 641 (2) Adult and Older Adult Health I**

Focuses on health promotion, maintenance, and restoration of health for adults and older adults. Emphasizes development of diagnostic, prescriptive, and management skills related to selected health problems to facilitate clinical decision making and delivery of advanced practice nursing.

**NURS 642 (2) Older Adult Health Adult and Older Adult Health II**

Theoretical concepts, assessments and intervention strategies related to health of culturally diverse children, adolescents and their families are critiqued. Health promotion/protection and nursing management of acute and selected chronic health problems of the child and the adolescent will be considered.

Prerequisite or Co–requisite: 552, 603, 620, 641, or professor consent

**NURS 643 (2) Reproductive Health**

Theoretical concepts, assessments and intervention strategies related to women's health critiqued; health promotion/protection and management of selected acute and chronic reproductive health issues of culturally diverse person addressed; reproductive health care delivery system, ethics, health policy, and research issues explored.

Prerequisite or Co–requisite: Nursing science component, 552, 603, 606, 620, 641, 642 or professor consent

**NURS 644 (2) Older Adult Health**

Focuses on promoting, maintaining, and restoring the health of older adults across various health care settings. Emphasizes development of clinical expertise in assessment, diagnosis, and management of pathophysiological and family alterations common to the older adult population.

Prerequisite or Co–requisite: Nursing science component, 552, 603, 606, or professor consent

**NURS 645 (4) Advanced Practice I**

Students contract with a master's prepared certified family or specialty nurse practitioner or family practice physician, who serves as a mentor/preceptor during the clinical experience.

Prerequisite or Co–requisite: NURS 552, N553, 641 and current CPR certification or professor consent

**NURS 646 (4) Advanced Practice II**

Students contract with a master's prepared certified family or specialty nurse practitioner or family practice or specialty physician, who serves as a mentor/preceptor during the clinical experience.

Prerequisite or Co–requisite: NURS 641, 642, 643, 645 or professor consent

**NURS 647 (4) Advanced Practice III**

Students contract with a master's prepared certified family nurse practitioner or family practice physician, who serves as a mentor/preceptor during the clinical experience.

Prerequisite: NURS 641, 642, 643, 645, 646; Co–requisite: NURS 644 or professor consent

**NURS 648 (3) Advanced Practice II CNS**

Competencies expected of the clinical nurse specialist are presented. Professional attributes, leadership, collaboration, and consultation within the nursing personnel sphere of influences are addressed and experiences using these skills are included in the 200 hour clinical accompanying this course.

Prerequisite: NURS 552, 603, 606, 640, and current CPR certification or professor consent

**NURS 649 (3) Advanced Practice III CNS**

Development of CNS competencies continues in this course with particular focus on the skills necessary for advanced nursing practice within the organization/network sphere of influence. The 200–hour clinical is designed to use these skills in facilitation of system change.

Prerequisite or Co–requisite: NURS 552, 603, 606, 640, and current CPR certification or professor consent

**NURS 650 (1) The Reflective Clinician****NURS 651 (2) Health Promotion and Illness Prevention: Nursing**

The course is designed for post–baccalaureate nurses seeking a health promotion–disease prevention emphasis in their nursing practice. Concept of health is explored. Theories and models of disease prevention and health promotion are described, analyzed and applied to research and nursing practice. Elective.

**NURS 654 (2) Chronic Illness: Nursing Interventions**

This course is designed of post–baccalaureate nurses in all settings who desire advanced nursing care knowledge in order to work with individuals and families with chronic illness. Topics explored are chronic illness, inherent stressors, current research, nursing management, program, organizations, policy, and care delivery issues. Elective.

**NURS 660 (3) Organizational and Systems Leadership**

Organizational and systems leadership skills critical for improvement of clinical care and health care outcomes are evaluated. The focus is on legal and business realities of leading health care systems, including individual organizations and large systems.

**NURS 661 (3) Advanced Practice CNS I**

Clinical experience contracted with a clinical nurse specialist who serves as a mentor/preceptor. The focus of the 100–hour clinical is the client/patient sphere of influence.

Prerequisite or Co–requisite: NURS 552, 553, 554, 603, 640 and current CPR certification or professor consent

**NURS 677 (1–5) Individual Study**

Course provides students with opportunity to investigate a problem or question related to an area of nursing practice. Students work with a nursing faculty advisor in writing the project and preparing to disseminate results of the project.

**NURS 699 (1–4) Thesis**

Course provides students with the opportunity to focus on a research problem that is related to their area of nursing practice. Students work with a nursing faculty advisor (committee chairperson) in developing the thesis proposal, writing the thesis, and preparing to disseminate the results of the study. With the advisor's approval\*, the thesis is submitted for oral defense as part of the requirements for the MSN or MSN degree.

**NURS 700 (4) Theoretical Foundations for Nursing Practice**

This course focuses on theoretical perspectives and foundations for inquiry in the discipline. The structure of nursing knowledge (phenomena, concepts, and theories) will be evaluated for its relationship to practice. The interrelationship of theory, research, and practice will be analyzed.

**NURS 701 (4) Applied Biostatistics**

The goals of this course are to develop statistical skills necessary to evaluate critically biomedical research using advanced quantitative methods, to identify appropriate techniques for interpretation of results of independent research, and for presentation of results to improve clinical practice.

**NURS 702 (4) Clinical Scholarship and Analytical Methods for Advanced Nursing**

This course focuses on the conduct of clinical scholarship. Content includes transformational research approaches and evidence–based practice processes, including epidemiological methods. Evaluation methods of clinical practice change outcomes on individuals, groups, populations, and systems are addressed.

**NURS 704 (4) Clinical Prevention and Population Health**

The conceptual foundations of culturally sensitive clinical prevention and population health in advanced nursing practice will be evaluated. A global perspective to clinical prevention and population health that bridges illness and preventive care models will be investigated and designed.

**NURS 706 (4) Organizational and Systems Leadership**

Organizational and systems leadership skills critical for culturally sensitive nursing practice to improve health care and outcomes are enhanced. Focus is on transformational leadership, measurement of outcomes, data driven decision–making, and the business realities of leading within health care.

**NURS 728 (4) Gender Specific Health Care: Theory, Research, and Practice**

This course focuses on the theoretical and research based differences between men and women's physiological function and experience of the same diseases within the context of culturally defined gender roles. Examination of large databases will build on existing knowledge.

**NURS 740 (3) Clinical Scholarship I**

This clinical seminar focuses on collaboration of interprofessional teams and the roles of advanced practice nurses within this collaboration. Development of a framework for identifying, implementing, and evaluating a collaborative effort is emphasized.

Prerequisite: NURS 700 and 702, HLTH 702

**NURS 750 (3) Clinical Scholarship II**

Develop, implement, and evaluate culturally-sensitive approaches to improve health status/access patterns and/or address gaps in care of populations within a community of focus whether locally, nationally, or globally.

Prerequisite: NURS 700, 702, , 704, 740, HLTH 702

**NURS 760 (3) Clinical Scholarship III**

This course focuses on development of consultative and leadership strategies for use in implementing a clinical practice approach to a clinical nursing practice problem. The inter-professional context along with various information technologies and information systems will be considered.

Prerequisite: NURS 700, 702, 704, 740, 750, HLTH 702

**NURS 770 (3) Clinical Scholarship IV: Capstone**

This seminar and practicum focuses on accountability for advancing the nursing profession and contributing to the developing body of nursing practice knowledge. Addresses advocacy at all levels of policy implementation. Culminates in a successful oral defense of the capstone project.

Prerequisite: NURS 700, 702, 704, 706, 740, 750, 760

**NURS 798 (1) Continuing Registration**

This course allows continuing enrollment in the Consortium DNP program to complete the capstone project. It continues registration after completion of all other course requirements and may not be used to meet any other program or graduation requirement.

**PHILOSOPHY**

*College of Arts and Humanities  
Department of Philosophy*

227 Armstrong Hall • 507-389-2012

Philosophy courses at Minnesota State University can be taken as part of the cross-disciplinary studies program, or to supplement other disciplines

**COURSE DESCRIPTIONS****PHIL 510 (3) Philosophy of Language**

Theories of meaning, speech acts and semantics, relation of language to the world.

**PHIL 537 (3) Contemporary Philosophy**

Major philosophers and philosophies of the late 20th Century.

**PHIL 540 (3) Philosophy of Law**

Discussion of philosophical issues in law by way of connecting legal problems to well-developed and traditional problems in philosophy, e.g., in ethics, political philosophy, and epistemology, and investigates the philosophical underpinnings of the development of law. The course takes an analytical approach to law (as opposed to historical, sociological, political, or legalistic approaches) and devotes a substantial part of the semester to a major work on law written by a philosopher.

**PHIL 545 (3) Feminist Philosophy**

Study of philosophy done from a feminist perspective in areas such as metaphysics, epistemology or ethics.

**PHIL 550 (3) Special Topics**

Intensive study of a single philosopher or topic.

**PHIL 555 (3) Existentialism & Phenomenology**

In-depth analysis of major European existentialists such as Kierkegaard, Heidegger, and Sartre.

**PHIL 560 (3) Philosophy of the Arts**

Aesthetic principles, theories, and the creative process. Theories of visual arts, music, literature, dance, etc.

**PHIL 565 (3) Philosophy of Film**

This course investigates some of the central philosophical issues in our thinking about film, including questions about narrative, ontology, ethical criticism of film, the role of artistic intentions in interpretation, artistic medium, and the art/entertainment distinction

**PHIL 573 (3) Knowledge and Reality**

Analysis of the status and justification of claims about the nature and limits of human knowledge and the nature of what may be held to be real.

**PHIL 574 (3) Philosophy of the Mind**

The nature of consciousness, mind and body relations, and freedom of action.

**PHIL 575 (3) Philosophical Issues in Cognitive Science**

This course examines the conceptual and philosophical complexities of efforts to understand the mind in science. Topics include the differences and similarities between humans and other animals, the nature of psychological explanation, and reductive strategies for explaining consciousness, intentionality and language.

**PHIL 580 (3) Philosophy of Science**

Nature of explanations, causality, theoretical entities, and selected problems.

**PHIL 581 (3) Philosophy of Biology**

This course examines conceptual and philosophical issues in biology, the nature and scope of biological explanation and conflicts between evolutionary and religious explanations for the origin of life.

**PHIL 590 (1-6) Workshop**

Special event of less than semester duration.

**PHIL 591 (1-6) In-Service****PHIL 677 (1-6) Individual Study**

Individual study of a philosopher or problem.

**PHIL 691 (1-6) In-Service**

Individual service project

**PHYSICAL EDUCATION MA****PHYSICAL EDUCATION MS**

(DISCIPLINE-BASED)

*College of Allied Health and Nursing  
Department of Human Performance  
1400 Highland Center • 507-389-6313*

The strength of the graduate programs in the Department of Human Performance at Minnesota State University rests in flexibility. There are opportunities for students to pursue either the Master of Arts or the Masters of Science degree in Physical Education. The programs may be structured to the needs of the generalist planning either to enter or return to the public school setting, or for the student who desires specialization. The program affords in-depth study opportunities in the following concentrations: Developmental/Adapted Physical Education, Elementary/Secondary Physical Education, Exercise Science: Cardiac Rehabilitation-Clinical Exercise Physiology, Exercise Science: Exercise Physiology, Psychological Aspects of Sport, and Sport Management.

Excellent interdisciplinary relationships exist across the University in departments offering graduate studies. Students are encouraged, where appropriate, to avail themselves of the various dimensions of expertise. The graduate program also offers a complement of summer classes, facilitating continuity in graduate pursuits.

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## PHYSICAL EDUCATION

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**Admission.** The requirements of the College of Graduate Studies and Research must be completed for admission to program. Applicants must have attained a minimum GPA of 3.00 on a 4.00 scale for unrestricted admission. Provisional admittance may be granted if a student has attained a minimum of 2.75 on a 4.0 scale for all undergraduate coursework.

**Graduate Assistantships and Financial Aid.** The Department of Human Performance, in cooperation with athletics, campus recreation programs and a contractual agreement with Gustavus Adolphus College and Orthopedic and Fracture Clinic, employs approximately 30 graduate assistants at stipends up to \$9,500 for the academic year. All graduate assistants must be full-time graduate students. Graduate assistants receive a tuition stipend and qualify for in-state tuition rates. Applications for graduate assistantships are accepted until positions are filled, but candidates are encouraged to apply by February 15 for the following fall semester. Graduate assistantship applications can be secured directly from the College of Graduate Studies and Research, or its Web site.

### PHYSICAL EDUCATION MA/MS

#### General Requirements - All Options:

All students must take HP 610 Statistical Methods, HP 630 Techniques of Research. Students must have an undergraduate statistics course as a pre-requisite for these classes.

**Language Competency.** A reading knowledge of one modern foreign language or research substitution is required in the MA programs. The student should consult with the graduate coordinator to determine specific requirements.

At least 20 credits must be in the Department of Human Performance, and at least 50% of the coursework must be taken at the 600 level (excluding thesis and APP credits).

**Thesis Plan:** Oral defense and a thesis for credit (3 credits minimum) are required.

**Alternate Plan Paper:** A capstone paper approved by the advisor is required and may be developed in connection with a graduate course in the Human Performance Department. A written comprehensive exam is required, and at discretion of student's advisor, an oral exam germane to the APP may be required.

A manuscript option is also available in some programs.

Students must have a 3.0 GPA prior to enrolling in a course that fulfills the capstone requirement. Students must also complete a research methods prior to enrolling in thesis, APP, or manuscript credits.

#### Concentrated Options of Study

Students should be aware that changes may occur in a concentration core during their time on campus, since curriculum is always an on-going process. Therefore, the student should always be in consultation with the advisor in the event that the faculty submits new proposals that may reflect such changes. In such an event, students will always be afforded their rights to take advantage of such changes that will best serve them during their program of study. Choose an area of concentration from those listed below.

#### SPORT MANAGEMENT

**Program Purpose:** The Sport Management graduate program is designed to provide advanced professional preparation that develops competitive sport management leaders through a comprehensive education in both theory and its application in sports business. The major prepares students with sport business concepts and develops skills and knowledge in the following areas: management, marketing, promotions, communication, legal preparation, public relations, consumer behavior, facilities, and finance. The curriculum follows the guidelines set for the preparation of students in sport management by the NASSM/NASPE. Students have the option of pursuing their Master's degree on a thesis or internship track as well as other options.

**Admission:** Applications for admission in the Sport Management program are competitive and all required application materials must be received by March 1st for a priority consideration. Early application is recommended as enrollment is limited. If a vacancy occurs during the academic year, mid-year admission is possible.

**Applicants must submit the following materials:**

1. Completed application to Minnesota State University, Mankato.

2. Verification of GRE
3. Official transcripts listing undergraduate/graduate degree(s) to be sent directly from the degree granting institution to the College of Graduate Studies and Research.
4. Professional resume or vita.
5. Statement of interest (2-3 page essay describing your career goals, reasons for pursuing a graduate degree. The statement of interest will also serve as your writing sample.
6. Three letters of recommendation (Forms are available from the Department of Human Performance)
7. A completed undergraduate (or graduate) statistics or tests and measurements course as a prerequisite (note: you could be provisionally admitted without this course, but would need to complete this course before enrolling in HP 610 –Statistical Methods)

**Financial Assistance:** A number of graduate assistantships in the sport management program, Minnesota State Mankato athletics, and other university opportunities are available. Applications can be obtained online from the College of Graduate Studies and Research. These forms should be filed by February 1 for the following academic year. GA applications will be accepted after this date if availability still exists. Also, several sport management scholarships are available to recognize current sport management students at Minnesota State University, Mankato who demonstrate high achievement in many facets of student life, including academics and extracurricular activities. Information about these scholarships can be found at our sport management Web site.

### PHYSICAL EDUCATION (MA)

Thesis Plan - 30-32 credits

Alternate Plan Paper - 34-36 credits

Internship Plan (36 credits), including major project, e-portfolio, and other items for evaluation as required by the program

This program is designed to prepare the student for a career in some capacity of sports management at either a public school, college or professional/private sector of sport.

#### Required for Major (Theory Core) 8-10 Credits

HP	610	Statistical Methods
HP	630	Techniques of Research
HP	699	Thesis F/S/Su 3-4 <b>OR</b>
HP	694	Alternate Plan Paper <b>OR</b>
HP	698	at least 8 credits (400 hours of internship)

#### Sport Management Theory Core – 15-22 Credits

HP	650	Principles of Sport Management (3)
HP	665	Sport Law (3)
HP	667	Advanced Sport Marketing (3)
HP	651	Sport Management Seminar (3)
HP	698	Internship (3-10)

#### Elective Courses – 6-17 Credits

HP	535	Planning Sport Facilities (3)
HP	637	Sport Media, Sales & Sponsorship (3)
HP	638	Managing Sporting Events (3)
HP	649	Sport In American Culture (3)
HP	660	Financial Aspects of Sport (3)
HP	661	Management & Administration of Intramural and Recreational Facilities F (3)
HP	641	Psychology of Sport & Exercise S (3)

### SPORT MANAGEMENT (MS)

(Thesis Plan - 30-32)

(Alternate Plan Paper - 34)

#### Required Sport Management Core (18 credits)

HP	610	Statistical Methods (3)
HP	630	Techniques of Research (3)
HP	650	Principles of Sport Management (3)
HP	651	Sport Management Seminar (3)
HP	665	Sport Law (3)
HP	698	Intern: Sport Administration (2-10)

**Required Thesis or Alternate Plan Paper**

- HP 699 Thesis (3-4) OR
- HP 694 Alternate Plan Paper (1-2)
- HP 698 Internship (8), including major project, e-portfolio, and other items for evaluation as required by the program

**Required Electives (9-17 credits)**

The student must choose the remaining electives in consultation with an advisor. HP 637 Sport Media, Sponsorship and Sales; HP 638 Managing Sporting Events; HP 535, Planning Sport Facilities; HP 649 Sport in American Culture; and HP 660, Financial Aspects of Sport, and HP 667 Advanced Sport Marketing are strongly recommended.

**PHYSICAL EDUCATION PEDAGOGY**

(Thesis Plan - 30-32 credits)  
(Alternate Plan Paper - 34-36 credits)

The program is designed to refine teaching skills for the elementary, middle school, and high school physical educator.

**Required Core (24 credits)**

- HP 608 Curriculum Design in Physical Education (3)
- HP 610 Statistical Methods (3)
- HP 612 Inclusive Physical Education (3)
- HP 617 Models and Instructional Strategies in Physical Education (3)
- HP 623 Current Issues in Physical Education and Adapted Physical Education (3)
- HP 627 Systematic Observation in Physical Education (3)
- HP 630 Techniques of Research (3)
- HP 668 Applications in Physical Education (3)

**Required Thesis or Alternate Plan Paper**

- HP 694 Alternate Plan Paper (1-2 credits) OR
- HP 699 Thesis (3-4 credits)

**Required Electives (3 - 9 credits)**

Choose electives in consultation with an advisor. Approved electives include HP 620, HP 647, and HP 658. Graduate students enrolled in an alternate plan paper program must enroll in HP 620, HP 647, and HP 658.

**CARDIAC REHABILITATION/  
CLINICAL EXERCISE PHYSIOLOGY (CR/CEP)**

(35-37 credits)

The Master of Arts program in Cardiac Rehabilitation/Clinical Exercise Physiology provides the necessary laboratory, research and clinical experiences for employment in cardiopulmonary rehabilitation, adult fitness and corporate programs. Each year's class receives practical, hands-on experience in cooperation with area/regional hospitals in Mankato, Minneapolis/St. Paul, and Rochester, MN. The Cardiac Rehabilitation Program provides Phase 3 and 4 cardiac rehabilitation programming in health and exercise to patients each week. The required internship, during the middle and/or last semester of graduate work, provides additional opportunities in the student's area of study.

**Required Core (minimum 15-16 credits)**

- HP 601 Advanced Physiology of Exercise (3)
- HP 605 Nutrition in Human Performance (3)
- HP 610 Statistical Methods (3)
- HP 630 Tech. of Research (3)
- HP 693 Seminar in Exercise Science (1)
- HP 694 Alternate Plan Paper (2 credits) OR
- HP 699 Thesis (3)

**Required Concentration/Specialization (16-20 credits)**

- BIO 533 Cardiovascular Physiology (3)
- BIO 566 Pharmacology (3)
- HP 583 Cardiac Rehabilitation (3)
- HP 645 Physical Activity/Fitness an Chronic Disease (3)
- HP 655 ECG Interpretation (3)
- HP 698 Internship: Cardiac Rehabilitation (1-5)

**Required Electives (5 credits)**

choose any 5/600 level elective courses in consultation with an advisor

**EXERCISE SCIENCE/EXERCISE PHYSIOLOGY**

(34-36 credits)

This program is designed to provide comprehensive, laboratory-based study of the effects of physical activity on human structure and function across the life span. Degree requirements are structured so that the student may pursue study in an area of individual focus.

**Required Core (20-21 credits)**

- HP 601 Advanced Physiology of Exercise (3)
- HP 602 Laboratory Techniques (2)
- HP 605 Nutrition in Human Performance (3)
- HP 610 Statistical Methods (3)
- HP 630 Techniques of Research (3)
- HP 693 Seminar in Exercise Science (1)
- HP 694 Alternate Plan Paper (2) OR
- HP 699 Thesis (3)
- CHEM 560 Biochemistry (3)

**Required Electives (15-16 credits)**

Choose three from the following (other courses may be selected with consent of an advisor)

- HP 567 Wellness Program Development and Administration (3)
- HP 645 Physical Activity and Chronic Disease (3)
- HP 655 ECG Interpretation (3)
- HP 698 Internship: Exercise Physiology Lab (1-3)
- BIO 517 Biology of Aging and Chronic Disease (3)
- CHEM 561 Biochemistry II (3)
- PSYCH 551 Methods of Enhancing Performance (3)

**Choose one of the following:**

- BIO 533 Cardiovascular Physiology (3)
- BIO 538 Endocrinology (3)
- BIO 566 Pharmacology (3)

\*Chem 360 and/or 450 or equivalent transfer credit may be substituted for 560, resulting in 3 or more credits of additional graduate work by the student.

**DEVELOPMENTAL/ADAPTED PHYSICAL EDUCATION (MA)**

(Thesis Plan - 30-31)  
(Alternate Plan Paper - 34-36)

Maximum of 15 hours of D/APE licensure courses can count toward MA/MS degree because over 50% of coursework must be 600-level. \*If student already has D/APE licensure, D/APE coursework will consist of 600-level courses in D/APE, Special Education, and from other departments.

**Required (6 credits)**

- HP 610 Statistical Methods in Physical Education (3)
- HP 630 Techniques of Research (3)

**Required Core in D/APE (minimum 18-19 credits)**

- HP 511 Development Adapted Physical Education (3)
- HP 512 Assessment in Adapted Physical Education (2)
- HP 513 Life span Motor Development (2)
- HP 521 Teaching Sport to Individuals with Disabilities (2)
- HP 522 Teaching Adapted Aquatics (2)
- HP 545 Teaching Students with Cognitive and Emotional/Behavioral Disabilities (3)
- HP 571 Consulting Techniques in D/APE (3)
- HP 698 Internship in DAPE (1-2)

**Required Thesis or Alternate Plan Paper**

- HP 694 Alternate Plan Paper (1-2)
- HP 699 Thesis (3-4)

**Required Electives (9-12 credits)**

Student should consult with major advisor.

- HP 608 Curriculum Design in Physical Education (3)
- HP 612 Inclusive Physical Education (3)
- HP 617 Models and Instructional Strategies in Physical Education (3)
- HP 620 Typical and Atypical Motor Development Across the Life span (3)

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## PHYSICAL EDUCATION

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HP	623	Current Issues in Physical Education and Adapted Physical Education (3)
HP	627	Systematic Observation in Physical Education (3)
HP	647	Fitness Education (3)
HP	658	Authentic Assessment in Physical Education (3)
HP	668	Applications in Physical Education (3)

### PSYCHOLOGICAL ASPECTS OF SPORT

(Thesis Plan - 30-32)

(Alternate Plan Paper - 34-36)

The program is designed to develop a theoretical base in the discipline of sport psychology, and better prepare students and coaches to apply such knowledge to performance enhancement issues associated with competitive athletics and exercise settings.

#### Required Human Performance Core (16-18 credits)

HP	610	Statistical Methods (3)
HP	630	Techniques of Research (3)
HP	641	Psychology of Sport (3)
HP	649	Sport in American Culture (3)
HP	675	Motor Learning (3)
HP	698	Internship: Sport Psychology (1-3)

#### Required Thesis or Alternate Plan Paper (1-4 credits)

HP	694	Alternate Plan Paper (1-2)
HP	699	Thesis (3-4)

#### Required Psychology Core (9-10 credits)

PSY	551	Methods of Enhancing Performance (3)
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Two other course in Psychology or equivalent in consultation with major advisor.

#### Required Electives (3-11 credits)

Choose electives in consultation with major advisor. EDL 644, Ethics and Leadership and HP 677, IS: Sports in American Culture, are strongly recommended.

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## COURSE DESCRIPTIONS

### HP 511 (3) Developmental/Adapted Physical Education

Legal and theoretical bases for teaching physical education to students with disabilities. First course in D/APE sequence.

### HP 512 (2) Assessment in Adapted Physical Education

Evaluation of motor skills and fitness among students with disabilities.

### HP 513 (2) Lifespan Motor Development

Study of early childhood motor development from infancy through preschool age, including information on delayed development.

### HP 514 (3) Physiology of Exercise

Introductory study of the effects of both acute and chronic exercise on structure and function of the human body across the life span.

Prerequisite: Biol. 220, 230, HP 175

### HP 519 (2) Teaching Dance to Individuals with Exceptional Needs

Adaptation of dance materials to facilitate learning of individuals with special needs through simulated and hands-on teaching experiences.

Prerequisite: HP 109

### HP 521 (2) Teaching Sport to Individuals with Disabilities

Contemporary sport opportunities for individuals with disabilities, with application to teaching and transition planning.

Prerequisite: 4/511 or instructor permission

### HP 522 (2) Teaching Adapted Aquatics

Theory and practical experience in teaching swimming and other aquatic skills to individuals with disabilities. Pre: HP 182 or W.S.I. (HP 257).

### HP 535 (3) Planning Sport Facilities

The in depth study of the planning, development, and management of sport facilities (athletics, recreation, fitness/wellness centers physical education, etc.) utilizing and working with partners, vendors and expert resources.

### HP 539 (3) Nutrition for Physical Activity and Sport

This course provides in-depth exploration of the dietary needs of physically active individuals across the lifespan. Its laboratory component will focus on performance and interpretation of assessments commonly used to determine dietary and physiological status.

### HP 545 (3) Teaching Students with Cognitive & Emotional/Behavioral Disabilities

Theory, strategies, and best practices for teaching physical education to students with cognitive disabilities (including mental retardation, autism, and multiple disabilities accompanying mental retardation) and emotional/behavior disorders.

### HP 566 (3) Graded Exercise Testing and Exercise Prescription

An introduction to basic graded exercise tests and exercise prescription commonly used in clinical as well as health/wellness appraisal settings.

Prerequisite: HP 175, HP 414

### HP 567 (2) Wellness Program Development and Administration

Designed to review the various physiological, psychological, and administrative components involved in a comprehensive health/fitness program.

Prerequisite: HP 414 and 466 or equivalent

### HP 570 (3) Psychology of Coaching

To introduce interested students, professionals, and coaching licensure candidates to the psychological literature and latest techniques associated with coaching in an athletic setting.

Prerequisite: Psych. 101 or equivalent

### HP 571 (3) Consulting Techniques in D/APE

Study of techniques of consulting in D/APE with the spectrum of individuals involved in the IEP process, including but not limited to: students with disabilities, general physical education teachers, other school professionals and support service personnel, families/parents, peer tutors, and community agencies, to enhance the learning of students with disabilities both within and outside the classroom setting.

### HP 582 (1) Coaching Practicum

Supervised experience in a public school varsity/junior varsity sport setting.

Prerequisite: first aid and coaching theory and athletic training

### HP 583 (3) Cardiac Rehabilitation

A course designed to provide experience for persons seeking leadership roles in institutions housing programs of rehabilitative cardiovascular exercise and risk factor intervention.

Prerequisite: HP 4/514 and 4/567 or equivalent

### HP 590 (1-4) Workshop

Content is variable and based on special topic.

### HP 601 (3) Advanced Physiology of Exercise

Integration of the advanced concepts and relevant scientific information surrounding human performance physiology.

Prerequisite: HP 514

### HP 602 (2) Laboratory Techniques in Exercise Physiology

Laboratory experiences for advanced exercise physiology students, including various fitness and clinical tests, lactate analysis, spirometry, and measurement of expired gases.

Prerequisite: HP 4/514 or equivalent; HP 601

### HP 605 (3) Nutrition in Human Performance

An in-depth study of the nutritional needs of athletes and other active individuals, including discussion of current research in the area.

Prerequisite: HP 601

### HP 608 (3) Curriculum Design in Physical Education

Developing curriculum in physical education focusing on current theories and models, factors influencing curriculum, scope and sequence, scheduling, and assessing curricula.

### HP 610 (3) Statistical Methods

Introduction to the concepts of descriptive and inferential statistics, applied and theoretical research, and validity and reliability methods used in the disciplines of physical education, human performance, and exercise science.

Prerequisite: an undergraduate or graduate level statistics class or a "test and measurement" class.

**HP 612 (3) Inclusive Physical Education**

Legal, philosophical, and practical bases of including students of all abilities and in general physical education.

**HP 617 (3) Models and Instructional Strategies in Physical Education**

Best practices utilizing models of teaching, learning styles, and instructional strategies in physical education.

**HP 620 (3) Typical and Atypical Motor Development Across the Lifespan**

Hereditary and environmental factors of typical and atypical motor development across the lifespan.

**HP 623 (3) Current Issues in Physical Education and Adapted Physical Education**

Utilizing current literature to identify, analyze, synthesize, and evaluate current issues in physical education and adapted physical education.

**HP 627 (3) Systematic Observation in Physical Education**

Knowledge base in observation, observation models, techniques of coding and analyzing, developing observation skills, challenges to observation, and observations in various environments.

**HP 630 (3) Techniques of Research**

Introductory course to the research processes involved in the fields of physical education, exercise science, and human performance. Coverage of various types of research designs and writing of the research paper is a major intent of this course.

Prerequisite: required part of core for all master students in Dept. of Human Performance—must be a graduate student

**HP 631 (1) Seminar in Exercise Physiology****HP 635 (3) Gerontologic/Pediatric Exercise Physiology**

Acute and chronic changes in physiological functioning children and older adults.

**HP 637 (3) Sport Media, Sponsorship and Sales**

An in-depth study of sport management theories, policies, objectives, and strategies applied to sport marketing through the functions and areas of sport sponsorships, sales and broadcast, and print media.

**HP 638 (3) Managing Sporting Events**

Advanced study of managing sporting events covering the policies, strategies and tactics used including planning, budgeting, organization, human resources, risk management, and operations of conducting a successful sporting event.

**HP 641 (3) Psychology of Sport and Exercise**

Psychological parameters that affect performance in athletic and exercise settings. Emphasis on theoretical and scholarly literature associated with exercise and sport psychology. Practical application of psychological principles in sport and exercise dimensions will also be addressed.

Prerequisite: UG degree and basic Psych. (101)

**HP 642 (2) Issues in Sports Medicine**

A seminar/discussion format course dealing with current issues within the multi-disciplinary profession of sports medicine. A course directed toward disciplines dealing with all dimensions of the physically active individual.

**HP 645 (3) Physical Activity and Chronic Disease**

Identification and assessment of physical activity and fitness in health, lifespan, and various chronic diseases.

Prerequisite: HP 601

**HP 647 (3) Fitness Education**

Knowledge base on fitness levels of children and youth, assessing physical fitness levels, and developing physical fitness programs in the schools.

**HP 649 (3) Sport in American Culture**

Examines the institution of sport from a sociological perspective. The intent of the course is to identify and discuss ways in which societal values affect the character of sport and vice versa, and better understand the positive and negative consequences of the way sport is organized in our society.

**HP 650 (3) Principles of Sport Management**

This course will emphasize the management functions of planning, organizing, implementing, and controlling. Decision-making, problem-solving, communication, ethics, sport law, and leadership. Personnel management issues will also be addressed.

**HP 651 (3) Sport Management Seminar**

Examines a variety of topics related to the management of sport organizations. Topics include internship/career opportunities, social-cultural issues, ethical issues, mass communication, sport governance, economic issues, fund-raising, event/facility management, licensing, copyright issues, and labor relations.

**HP 655 (3) Electrocardiographic Interpretation**

Methods used in learning to interpret electrocardiograms plus a solid foundation of its application and history.

Prerequisite: HP 601

**HP 658 (3) Authentic Assessment in Physical Education**

Theory, new techniques, and best practices of assessing across the physical education curriculum.

**HP 660 (3) Financial Aspects of Sport**

Examines basic financial and managerial accounting concepts necessary to be financially literate in the business of sport. Budgeting and fundraising concepts will also be addressed. Analysis into the understanding of corporate financial workings in the sport industry will equip the student with essential management tools.

**HP 661 (3) Administration and Management of Intramural-Recreational Sports**

Philosophical base with emphasis on the principles, policies, and procedures for administration of intramural and recreational sports programs.

**HP 663 (3) Applied Sport and Exercise Psychology**

This is an advanced graduate seminar focused on applying knowledge towards the practice of sport and exercise psychology. This class focuses specifically on how to implement sport and exercise psychology principles as consultants, coaches, teachers, and/or other professionals.

**HP 665 (3) Sport Law**

The advanced study of legal aspects of sport with emphasis constitutional and statutory law, negligence and risk management, intellectual property, and contract law. The use of case law study and application to sport settings is utilized.

**HP 667 (3) Advanced Sport Marketing**

Advanced study of the principles of marketing of or through sport including marketing analysis, development of a marketing management plan, promotion, place, price, public relations, product as applied to sport and the sport industry.

**HP 668 Applications in Physical Education (3)**

Practical experiences utilizing knowledge, comprehension, application, analysis, synthesis and evaluation of student performances.

**HP 675 (3) Motor Learning**

Acquaints the student with the terminology, theory, and principles of skill acquisition in the sport and physical activity setting...as well as factors influencing that acquisition. Critical Analysis of research literature will also be part of this course.

Prerequisite: Psych. 101

**HP 677 (1-4) Individual Study**

Opportunity for in-depth studies when specific human performance course is not available to accommodate the student. Consultation with the faculty member is an important part of developing such topics that meet the individual study arrangement.

Prerequisite: grad. student/professor consent

**HP 680 (1-2) Systematic Readings in Physical Education and Human**

An arranged readings course of selected professional literature relating to physical education, human performance, exercise science, and sport studies. The student in consultation with a professor determines the specific body of scholarly literature that will be emphasized during the course.

Prerequisite: grad. student/professor consent

**HP 691 (1-4) In-Service**

Broad spectrum of foci available. Designed in consultation with requesting group.

Prerequisite: grad. student/professor consent

**HP 692 (1-10) Internship: Corporate and Community Fitness**

Designed to provide the student with hands-on experience in the area of corporate and community fitness.

Prerequisite: completion of graduate core courses: Chem. 560, HP 601, 602, 610, 630, except for seminar or thesis

## PHYSICS

### HP 693 (1) Seminar in Exercise Science

Studies the current problems and trends in selected fields of exercise science as well as current research being performed by department faculty, staff, and students.  
Prerequisite: graduate standing

### HP 694 (1-2) Alternate Plan Paper

Course requires completion of alternate plan paper.  
Prerequisite: grad. student/professor consent

### HP 696 (1-4) Manuscript

Course requires completion of a manuscript submitted for publication to a peer-reviewed journal. Prerequisite: grad. student/professor consent

### HP 698 (1-10) Internship

Supervised field experience related to the student's academic specialization associated with the disciplines of human performance. Disciplines include the following: College Teaching, Sport Management, Public School Teaching, D/APE, Intramural-Recreational Sports Management, Elementary Physical Education, Exercise Physiology, and Sport Psychology.  
Prerequisite: grad. student/professor consent

### HP 699 (1-4) Thesis

Course requires completion of thesis paper. Prerequisite: grad. student/professor consent

## PHYSICS MS

### PHYSICS EDUCATION MS

(DISCIPLINE-BASED)

*College of Science, Engineering, & Technology*  
*Department of Physics & Astronomy*  
141 Trafton Science Center N • 507-389-5743

The Department of Physics and Astronomy presents several opportunities for study at the graduate level. The Master of Science is offered as the professional degree in physics. This degree is designed for students wishing to prepare themselves for doctoral study, or for work in a research and technology position. Students interested in teaching at a community college may elect the MS Community College Teaching Track. Teacher certification is not required for this track.

The Master of Science in Physics Education is designed for individuals interested in strengthening their background in secondary school teaching. Previous teacher licensure is usually required.

**Admission.** In addition to meeting the general admission requirements of the College of Graduate Studies and Research, applicants must have an undergraduate degree in physics or a related field. Applicants must also provide the following:

1. A one-page personal statement of career interests and goals.
2. Two letters of recommendation from professors in colleges where the applicant did undergraduate study.
3. For international students, a minimum TOEFL score of 530 is required.

**Financial Assistance.** The Department of Physics and Astronomy has a limited number of graduate teaching assistantship available. Preference is given to those with a good command of spoken English. For students whose native language is not English, a minimum of TOEFL score of 550 is required. Application materials can be obtained on the web page of the Office of Graduate Studies and Research.

Consult the front of this bulletin for more information on financial aid.

### PHYSICS MS

(Thesis Plan-30 credits)

(Alternate Plan Paper -34 credits)

#### Required Core (13-16 credits)

PHYS 607 Introduction to Research (2)

PHYS 692 Seminar (1-2) must be taken the first 2 spring semesters for a minimum of 2 credits

#### and at least three of the four following courses:

PHYS 640 Math. Methods for Physicists (3)

PHYS 650 Classical Mechanics (3)

PHYS 660 Quantum Mechanics (3)

PHYS 670 Electricity & Magnetism (3)

#### Required General Electives ( 11-20 credits)

Choose any CSET 500/600 level courses approved by the student's advisor.

#### Required Thesis or Alternate Plan Paper

Phys 694 Alternate Plan Paper (1-2)

Phys 699 Thesis (3-6)

Student must be registered for a minimum of one credit of thesis or APP for every semester that they are working on their paper.

#### Additional Requirements

- A new graduate student is required to take a physics placement test prior to the start of his or her first semester of study.
- A graduate student should complete a Plan of Study during the first part of the second semester. This will require close consultation between the student and the initial advisor.
- At least half of the credits applied to the degree must be earned in 600-level courses excluding thesis or alternate plan paper credits.
- A reading knowledge of a foreign language or a demonstrated ability in computer programming is required.
- All student must pass a written comprehensive examination. The comprehensive exam must be taken by the end of the second semester. A student cannot start his or her thesis research before passing the comprehensive written exam.
- An oral defense of thesis is required for thesis plan.

## COMMUNITY COLLEGE TRACK

(Thesis Plan - 30 credits)

(Alternate Plan Paper - 34 credits)

#### Required Physics Electives Core (9-17 credits)

PHYS 697 Internship (4-8)

In addition, choose any 500/600 level Physics elective courses approved by the student's advisor.

#### Required Education Electives (minimum 6 credits)

KSP 625 Philosophy of Education in Historical Context (3)

KSP 670 Collegiate Institutions in the United States (3)

KSP 671 Learning and Teaching in Higher Education (3)

#### Required General Electives (6 credits)

Choose any 500/600 level elective courses from outside of physics and outside of professional education, approved by the student's advisor.

#### Required Research Methods (3 credits)

Choose a research methods course approved by the student's advisor.

#### Required Thesis or Alternate Plan Paper

PHYS 694 Alternate Plan Paper (1-2)

PHYS 699 Thesis (1-6) minimum 3 credits

#### Additional Requirements

A reading knowledge of a foreign language or a demonstrated ability in computer programming is required. Fifty percent of all courses must be taken at the 600 level excluding the thesis or APP credits. A written exam is required. A thesis and its oral defense are required if the thesis option is chosen.

## PHYSICS EDUCATION MS

(Discipline-Based)

(Thesis Plan - 30 credits)

(Alternate Plan Paper - 34 credits)

Teaching licensure is usually a prerequisite to pursuing this degree, since this degree does not lead to initial teaching licensure. Students who desire initial licensure should consult the Master of Arts in Teaching (MAT) program.

**Required Physics Electives (9-17 credits)**

Choose any 500/600 level elective courses approved by the student's advisor.

**Required Education Electives (6 credits)**

Choose any 500/600 level Education elective courses approved by the student's advisor from the following:

KSP 507, 605, 609, 612, 621, 625, 632, 640, 645, 654, 665,  
666, 677, 681  
EEC 520, 522, 602, 617, 631, 676  
CSP 570  
EDAD 652, 665

**Required General Electives (6 credits)**

Choose any 500/600 level elective courses approved by the student's advisor.

**Required Research Methods (3 credits)**

Choose a research methods course approved by the student's advisor.

**Required Thesis or Alternate Plan Paper**

PHYS 694 Alternate Plan Paper (1-2)  
PHYS 699 Thesis (1-6) minimum 3 credits

**Additional Requirements**

Fifty percent of all courses must be taken at the 600 level excluding the thesis or APP credits. A written exam is required. A thesis and its oral defense is required, if the thesis option is chosen.

## COURSE DESCRIPTIONS

PHYSICS**PHYS 504 (2) Physics & Society**

Relations between physics and other intellectual communities: e.g., philosophy, humanities, social sciences, the arts.

V Prerequisite: consent

**PHYS 517 (2) Biophysics**

Thermodynamic relationships; energy flow in living systems; metabolic heat generation and loss; homeostasis; atomic and molecular bonds in nucleic acids, proteins, and carbohydrates; hormonal regulation; cell metabolism; negative feedback control in living systems; cancer therapy; imaging; disease states; new theories and paradigms.

V Prerequisite: PHYS 212 or 222 and MATH 122

**PHYS 541 (4) Mechanics**

Rectilinear motion of a particle, general motion of a particle in three dimensions. Newtonian mechanics including harmonic oscillations, forced oscillations, central forces and orbital motion, collisions, noninertial reference systems, dynamics of a system of particles, rigid body motion, Lagrangian and Hamiltonian mechanics, normal coordinates.

F Prerequisite: PHYS 212 or 222 and MATH 223 and 321

**PHYS 547 (3) Electricity & Magnetism I**

Electrostatic fields, magnetostatic fields, steady currents, electromagnetic induction. Review of vector algebra.

F Prerequisite: PHYS 212 or 222 and MATH 223, 321, or 422

**PHYS 548 (3) Electricity & Magnetism II**

Electromagnetic waves, propagation and radiation of waves, electrodynamics and relativity.

S Prerequisite: PHYS 447 or 547

**PHYS 553 (3) Solid State Physics**

Atoms in crystals, wave in crystals, thermal vibrations of the crystal lattice, free electron model, band theory of solids, semiconductors and PN junctions, magnetism, and superconductivity.

S (of odd calendar years) Prerequisite: PHYS 435 or 535

**PHYS 557 (3) Optics**

Geometric optics, wave optics, properties of light and matter, optics of transformations, and quantum optics. Lecture and laboratory.

S (of odd calendar years) Prerequisite: PHYS 222 and MATH 122

**PHYS 561 (4) Quantum Mechanics**

A systematic development of foundations of quantum mechanics. Observables, operators, state functions, expectation values. Matrix formulation of eigenvalue problems. The hydrogen atom, electron spin, angular momentum, and perturbation theory.

F Prerequisite: PHYS 435/535, 441/541, and MATH 321

**PHYS 565 (3) Computer Applications in Physics**

Numerical solutions of physics problems and computer simulations of physical systems. Lecture and laboratory.

F Prerequisite: PHYS 212 or 222, and MATH 122, and familiarity with some programming language, or consent

**PHYS 573 (3) Statistical Physics**

Statistical mechanics, kinetic theory, thermodynamics.

S (of even calendar years) Prerequisite: PHYS 212 or 222 and MATH 223 and 321

**PHYS 575 (2) Advanced Laboratory**

Experiments in modern physics, including solid-state physics and optics. Requires more independent work than introductory laboratories.

S Prerequisite: PHYS 436 or 536 or consent

**PHYS 580 (2) Laboratory Experiences in Physical Science**

For prospective teachers in elementary schools. Topics include weather, weather forecasting and record keeping, simple machines, electricity, chemistry, sound, light, and others. May not count as a physics elective. Not available for P/N grading.

F, S, SS Prerequisite: PHYS 101

**PHYS 582 (4) Teaching Methods and Materials in Physical Science**

Current methods of teaching all physical sciences with emphasis on physics and chemistry. For students planning to teach at a middle school, secondary school, college, or university. May not count as a physics elective.

S Prerequisite: one year of chemistry and one year of physics or consent

**PHYS 584 (2) Middle/Junior High Science Teaching**

Current methods of teaching all sciences with emphasis on physical science, physics, chemistry, and earth science.

V Prerequisite: majority of required courses completed or consent

**PHYS 590 (2-4) Workshop**

A short course devoted to a specific topic in physics. May be repeated for credit on each new topic.

V

**PHYS 591 (1-8) In-Service**

A course designed to upgrade the qualifications of a person on-the-job.

V

**PHYS 595 (1-3) Selected Topics**

A course in an area of physics not regularly offered. Topic and credit assigned by department each time offered.

V

**PHYS 607 (2) Intro to Research**

Use of the library, electronic and machine shop practices, vacuum and cryogenic techniques, research interests of faculty.

F

**PHYS 640 (3) Mathematical Methods for Physicists**

Mathematical methods necessary for advanced study in physics. Topic include functions of complex variables, calculus or residues, integral transforms and special functions.

**PHYS 650 (3) Classical Mechanics**

Variational calculus, Lagrangian mechanics, the motions of particles and rigid bodies, the dynamics of oscillating systems and Hamilton-Jacobi theory.

Pre: PHYS 441 or equivalent

**PHYS 660 (3) Quantum Mechanics**

Bound state and scattering problems in one, two, and three dimensions. Approximation methods for stationary states. Time-independent and time-dependent perturbation theory. General formalism of quantum theory.

Pre: PHYS 461 or equivalent.

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## PHYSICS

### PHYS 670 (3) Electricity and Magnetism

Electrostatics, magnetostatics, boundary-value problems, Green functions, time-varying fields, Maxwell equations, conservation laws.  
Pre: PHYS 448 or equiv.

### PHYS 675 (1-4) Selected Topics

A course in an area of physics not regularly offered. Topic and credit assigned by department each time offered.  
V

### PHYS 677 (1-4) Individual Study

Special arrangements must be made with an appropriate faculty member or the department office. May be repeated for credit on each new topic.  
V

### PHYS 680 (1) Curriculum Study in Physics

Presentation and discussion of curricular developments.  
V

### PHYS 681 (2) Demonstration in Physics

Materials, techniques, and procedures.  
V

### PHYS 691 (1-4) In-Service

A course designed to upgrade the qualifications of persons on-the-job.  
V

### PHYS 692 (1) Seminar

Students will attend research seminars presented by faculty in the department, or speakers from other institutions. Students also make and critique presentations made by themselves and other students. May be repeated for credit  
V

### PHYS 694 (1-2) Alternate Plan Paper

V

### PHYS 695 (1-6) Research

V

### PHYS 696 (1-2) Independent Reading

Special arrangements must be made with an appropriate faculty member or the department office. May be repeated for credit on each new topic.  
V

### PHYS 698 (1-8) Internship

Provides student the opportunity to gain expertise and experience in a special field under the supervision of a qualified person.  
V

### PHYS 699 (1-6) Thesis

V

## ASTRONOMY

### AST 520 (3) Stellar Astrophysics

Blackbody radiation; radiative transfer; atomic structure; spectroscopic notation; excitation; ionization; absorption and emission coefficients; line profiles; analysis of stellar spectra.  
ALT-F Prerequisite: AST 225 and PHYS 222

### AST 521 (3) Stellar Structure

The gaseous state; degenerate matter; equations of stellar structure; polytropes; models of stellar interiors and atmospheres; stellar evolution; nucleosynthesis; stellar endpoints.  
ALT-S prerequisite: AST 520

### AST 530 (3) Galactic Structure

Structure, kinematics, and dynamics of our galaxy.  
ALT-F Prerequisite AST 225, PHYS 222, and MATH 223

### AST 531 (3) Extragalactic Astronomy

Normal galaxies; groups and clusters of galaxies; galaxy interactions and mergers; active galactic nuclei; large-scale structure; galaxy formation and evolution; cosmology.  
ALT-S Prerequisite: AST 530

### AST 591 (1-6) In-Service

A course designed to upgrade the qualifications of persons on-the-job.  
V

### AST 594 (1-6) Workshop

A short course devoted to a specific astronomical topic. May be repeated for credit on each new topic.  
V Prerequisite: consent

### AST 595 (1-4) Selected Topics

### AST 677 (1-6) Individual Study

Special arrangements must be made with an appropriate faculty member or the departmental office. May be repeated for credit on each new topic.  
V Prerequisite: consent

### AST 691 (1-6) In-Service

A course designed to upgrade the qualifications of persons on-the-job.  
V Prerequisite: consent

### AST 694 (1-2) Alternate Plan Paper

V Prerequisite: consent

### AST 695 (1-6) Research

Students will conduct supervised research in astronomy.  
V Prerequisite: consent

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## PSYCHOLOGY

College of Social and Behavioral Sciences

Department of Clinical Psychology  
23 Armstrong Hall • 507-389-2724

### CLINICAL PSYCHOLOGY MA

### INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY MA

### SCHOOL PSYCHOLOGY Psy.D.

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### CLINICAL PSYCHOLOGY

Application for graduate study in Clinical Psychology should be initiated by contacting the Department of Psychology as well as the College of Graduate Studies and Research. Two separate applications are required. The Clinical Psychology Program application is available from the department and must be submitted to the clinical program to initiate the admission review process. All applicants should arrange to take the GRE and have scores forwarded to the College of Graduate Studies and Research and to the Clinical Program Admission Committee.

The Clinical Psychology Program is a full time, two year research oriented course of study which provides theoretical and applied training to students who wish to pursue doctoral study. Graduates typically pursue the doctorate in professional psychology.

**Admission.** In addition to completing the general admission requirements for the College of Graduate Studies and Research, the following must be completed:

1. A bachelor's degree in psychology from an accredited institution. Course-work must include statistics.
2. Applicants who have a bachelor's degree other than psychology, from an accredited institution and have completed courses in statistics, experimental psychology, personality, abnormal psychology, conditioning, learning or behavior modification, developmental psychology (child, adolescent, or aging) and a course in history and systems of psychology can be considered for admission.
3. Students with undergraduate course deficiencies may be considered, however, they must complete deficiencies prior to enrolling in advanced coursework.
4. The GRE is required (see department for specific requirements).
5. Three letters of recommendation, preferably from psychology professors.
6. A personal statement including the applicant's interest in clinical psychology and long term career goals.

**CLINICAL PSYCHOLOGY MA**

(Thesis Plan - 50 credits)

Required Core Courses (50 credits)

PSYC 610	Research Design & Statistics (4)
PSYC 613	Behavior Research Methodology (4)
PSYC 618	Multivariate Analysis (4)
PSYC 649	Behavior Theory and Philosophy (3)
PSYC 651	Adult Psychopathology & Therapy (4)
PSYC 654	Clinical Case Management (4)
PSYC 682	Child Psychopathology & Therapy (4)
PSYC 683	Behavior Assessment (4)
PSYC 689	Standards and Ethics (3)
PSYC 691	Clinical Practicum I (2)
PSYC 692	Clinical Practicum II (2)
PSYC 696	Research Clinical Psychology I (3)
PSYC 698	Research Clinical Psychology II (3)
PSYC 699	Thesis (3)

**Required Elective**

0 to 6 credits

**Recommended**

PSYC 519	Psychometric Theory (4)
PSYC 578	Health Psychology (4)

**INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY**

Application for graduate study in Industrial/Organizational Psychology should be initiated by contacting the College of Graduate Studies and Research. Admission will be expedited by also writing to the Department of Psychology Chairperson directly for detailed information on the Industrial/Organizational Psychology program. All applicants should arrange to take the GRE exams and have scores forwarded to the College of Graduate Studies and Research and the Admissions committee of the selected program.

The program in Industrial/Organizational Psychology provides theoretical and technical training which enables students to diagnose and resolve problems related to organizational effectiveness. Graduates typically pursue careers in human resource management and/or Ph.D. programs in Industrial/Organizational Psychology.

**Admission**

1. A bachelor's degree from an accredited institution
2. A minimum of 15 semester credits in psychology including introductory psychology, statistics, social psychology, personality theories, and experimental or cognitive psychology. Students with deficiencies in prerequisite courses are sometimes admitted, although it is generally preferable to complete such courses prior to beginning graduate studies.
3. GPA of at least 3.0 for the last two years of undergraduate work.
4. Transcripts from all institutions of higher learning attended.
5. GRE scores (see department for specific requirements).
6. Three letters of recommendation, preferably from psychology professors who are familiar with the student's work. For applicants working in managerial positions, one letter may be submitted by the applicant's supervisor.
7. A personal statement indicating the applicant's interests and experience.

**INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY MA**

(Thesis Plan - 45 credits)

PSYC 505	Motivation (4)
PSYC 519	Psychometric Theory (4)
PSYC 542	Group Psychology (4)
PSYC 553	Human Factors (3)
PSYC 609	Internship (2)
PSYC 610	Research Design & Statistics (4)
PSYC 618	Multivariate Analysis (4)
PSYC 623	Personnel Training (3)
PSYC 624	Stress & Health in the Workplace
PSYC 633	Job Analysis and Performance Appraisal (4)
PSYC 660	Employee Selection (3)
PSYC 662	Training & Development (3)
PSYC 689	Standards and Ethics (3)
PSYC 695	Research in Industrial/Organizational Psychology I (2)
PSYC 697	Research in Industrial/Organizational Psychology II (2)
PSYC 699	Thesis (3)

**Required Elective Courses**

PSYC 623 or PSYC 542 (3 credits)

**SCHOOL PSYCHOLOGY****Doctorate of Psychology (Psy.D.) in School Psychology**

The Doctor of Psychology (Psy.D.) degree program in school psychology at Minnesota State University, Mankato trains students to attain certification to practice as school psychologists and/or pursue other doctoral level employment such as university teaching. The program is designed to meet the doctoral-level accreditation standards of the National Association of School Psychologists. The program consists of 106 semester credits typically completed over five years. Some students who have completed master's or specialist's training are admitted with advanced standing. The program is housed in the psychology department and emphasizes (a) data-based decision making, (b) multiculturalism, (c) mental health, and (d) prevention.

**Curriculum****Professional Experiences (22 credits minimum)**

PSYC 702	Field Experience I (1)
PSYC 703	Field Experience II (1)
PSYC 750	School Psychology Practicum I (4)
PSYC 751	School Psychology Practicum II (4)
PSYC 760	Advanced Doctoral Practicum I (2)
PSYC 761	Advanced Doctoral Practicum II (2)
PSYC 795	Internship (1-8) 8 minimum

**Diversity and Disability (9 credits minimum)**

ESSP 605	Introduction to the Psychology and Education of Exceptional Children and Youth (3)
ETHN 650	Helping Across Cultures (3)
KSP 7XX	Multicultural School Psychology (3)

**Psych/Ed Foundations (18 credits minimum)**

PSYC 533	Child Psychology (4)
PSYC 670	Psychoneurology of Child Behavior (4)
PSYC 689	Standards and Ethics (3)
PSYC 701	Principles and Practices of School Psychology (4)
ESSP 661	Special Education Law (3)
PSYC 504	Memory and Cognition (4) Optional for Board Licensure

**Assessment (17 credits minimum)**

PSYC 683	Behavioral Assessment (4)
PSYC 705	Tests and Measures in Education (3)
PSYC 710	Cognitive Assessment (4)
PSYC 770	Child Mental Health: Assessment to Intervention (3)
ESSP 645	Formal/Informal Clinical Procedures (3)

**Intervention/Prevention (16 credits minimum)**

PSYC 682	Child Psychopathology and Therapy (4)
PSYC 725	Consultation and Prevention (4)
PSYC 775	Psychological Interventions in School (4)
ESSP 646	Instructional Interventions (4)
EEC 676	Strategies for Individualized Instruction (2) optional

**Research (24 minimum)**

PSYC 610	Research Design and Statistics (4)
PSYC 613	Behavioral Research Methods (4)
PSYC 618	Multivariate Analysis (4)
PSYC 780	Research in School Psychology (2) 4 minimum
PSYC 799	Dissertation (1-8) 8 minimum

**Total = 106 credits required****COURSE DESCRIPTIONS****PSYC 505 (4) Motivation**

Major concepts of human motivation and emotion, presentation of learned cognitive and biological influences on sustained behavior.  
Prerequisite: PSYC 201, 211, or 217, or consent V

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## PSYCHOLOGY

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### **PSYC 507 (4) Advanced Behavior Analysis**

The science and technology of behavior analysis. The application of the principles of operant and respondent conditioning to the understanding and modification of human behavior. The primary mode of instruction is unit/mastery based on the text. There will also be a lab component involving human and animal experiments. Prerequisite: PSYC 207 F,S

### **PSYC 509 (3) History and Systems**

Examination of the historical origins of the principal contemporary psychological theories. Prerequisite: two of PSYC 404, 407, 413, or 421 F,S

### **PSYC 513 (4) Sensation & Perception**

How the senses respond to environmental stimuli and how the information they provide is organized into meaningful patterns that make up our experience of the physical world. The effect of maturation and learning in altering those patterns are also considered. Prerequisite: PSYC 201, 207, or 211 F

### **PSYC 514 (4) Learning**

This course provides a broad overview and analysis of the major theories of human and animal learning.

### **PSYC 515 (4) Human Memory**

This course covers experimental and behavioral studies of human memory including long and short-term memory, memory for text, pictures, spatial information, and autobiographical events. Emphasis on real-world situations, including education, in which memory and learning play a role.

### **PSYC 516 (4) Cognitive Psychology**

An examination and evaluation of selected topics dealing with human information processing such as attention, memory, pattern recognition, consciousness, language, dyslexia, decision making, and problem solving.

### **PSYC 519 (4) Psychometric Theory**

An overview of development, use, and validation of psychological tests. Topics include reliability and validity, test construction, item analysis, ethics, test administration and scoring, and computerized testing. Prerequisite: PSYC 201 F

### **PSYC 520 (4) Drugs and Behavior**

Drug and alcohol use and abuse including history, biology, psychology, sociology, and clinical treatment and prevention of abuse. Prerequisite: PSYC 521 or equivalent V

### **PSYC 521 (4) Biopsychology**

Biological basis of psychological processes and behavior. Basic topics such as neuro-anatomy and neuron function are presented as well as more general ones such as sensation and movement, sleep, memory and learning, schizophrenia and depression. Prerequisite: PSYC 201, and either 207 or 211

### **PSYC 522 (4) Neuropsychology**

This course will provide a detailed analysis of the relationship between human behavior and brain function. Basic topics will include cerebral asymmetry, memory, language, and attention as well as behavioral deficits such as learning disabilities, psychiatric disorders, and disconnection syndromes associated with neurological abnormalities. V

### **PSYC 523 (4) Neuroscience**

The goal of neuroscience is to understand the human mind. This goal is approached by revealing the brain processes involved in how we perceive, think, remember, and move. Brain development, communication, and plasticity at the neural level are all described.

### **PSYC 524 (4) Physiological Psychology Laboratory**

This course provides an in-depth, hands on follow-up to biopsychology. Through lectures, discussions and laboratory exercises, this class will explore the workings of the brain, and how the structure and function of the nervous system leads to behavior.

### **PSYC 529 (3) Drug Dependence**

Examination of psychological theories relevant to the prevention and treatment of drug abuse. Prerequisite: PSYC 101 F

### **PSYC 533 (4) Child Psychology**

Physical, social, emotional, intellectual, and personality development from conception to preadolescence. Focus on interplay between maturation and experience. Prerequisite: PSYC 101 F,S

### **PSYC 536 (4) Adolescent Psychology**

This class covers the development of the individual from the age of 11 to 19 years of age. Discussion will include aspects of both normal and abnormal development F,S

### **PSYC 541 (3) Attitudes**

Examining cultural, social, and individual influences on attitude development and change through lectures and discussions of theories and findings and through experiential activities. Prerequisite: PSYC 101

### **PSYC 542 (3) Group Psychology**

Exploring factors affecting leadership and effective group processes through lectures and discussion of theories and findings and through experiential activities. Prerequisite: PSYC 101 V

### **PSYC 543 (3) Advanced Social Psychology**

An in-depth examination of social psychological research in laboratory and field settings. Prerequisite: PSYC 201, 211, and 439

### **PSYC 551 (3) Methods of Enhancing Performance**

The role of psychological factors in performance and psychological methods of performance enhancement. Factors examined will include attention, motivation, decision making, mental rehearsal, arousal, and self management. Prerequisite: 8 PSYC credits F

### **PSYC 553 (3) Human Factors**

The person-machine system: the strengths, operating limits, and tendencies of its human component. Prerequisite: PSYC 201 and 211 or 217 F

### **PSYC 555 (4) Abnormal Psychology**

This course is designed to increase the student's awareness and understanding of abnormal psychology. Students will become familiar with clinical descriptions, course of onset, and treatment regimens specific to various disorders. Prerequisite: 8 PSYC credits F,S

### **PSYC 556 (3) Personality Theories**

Major theories of normal personality formation, organization, and structure. Prerequisite: 8 PSYC credits F,S

### **PSYC 558 (3) Cultural Psychology**

Cultural psychology is an interdisciplinary field that unites psychologists, anthropologists, linguists, and philosophers to study how cultural meanings, practices, and institutions influence and reflect individual human psychologies. Cultural influences on cognition, emotion, motivation, and well-being will be discussed.

### **PSYC 560 (3) Psychology of Women**

Psychological study of women in historical and functional perspective. Role of hereditary, physiological, and socialization variables on women's thinking, feelings, and behavior. Prerequisite: PSYC 101 S

### **PSYC 561 (3) Marketing Psychology**

Analysis of product marketing and consumer purchasing strategies and their determinants. Prerequisite: 8 PSYC credits V

### **PSYC 562 (3) Management Psychology**

Managerial behavior, problems, and effects in planning, problem-solving, decision-making, supervision, leadership, conflict, communication, appraisal, motivation, training, and information systems in organizational environments. Prerequisite: 8 PSYC credits S

### **PSYC 563 (4) Survey of Industrial/Organizational Psychology**

An examination of the psychological aspects of human behavior in the work place. Topics include history of industrial/organizational psychology, job analysis, per-

formance measurement, predictors of performance, making personnel decisions, training, satisfaction, social perception, motivation, communication, group process, leadership, and organizational culture.

Prerequisite: PSYC 201, 211, or 217 F

### PSYC 566 (3) Psychology of Aging

Aging process and development during the adult years, psychology and psychological concerns of the aging individual, and dealing with death.

Prerequisite: PSYC 101 S

### PSYC 576 (3) Behavior Therapy

Principles and procedures of behavior therapy in clinical areas. Emphasis is placed on procedures for developing more appropriate behaviors through positive and negative reinforcement, modeling, and cognitive procedures. Decreasing problematic behaviors through decelerating consequences and exposure techniques is also presented.

Prerequisite: PSYC 211 or 217 V

### PSYC 578 (4) Health Psychology

The interface of behavioral and medical science is explored. Research on environmental and learning factors in the etiology and treatment of physical disease and rehabilitation is examined. Specific topics include pain management, medical compliance, behavior disorders in nursing homes, and chronic illnesses.

Prerequisite: Three courses in PSYC V

### PSYC 590 (1-3) Workshop

Topics to be announced. May be retaken for credit. V

### PSYC 591 (1) In-Service: Issues in Behavior Therapy

Current issues in behavior therapy are addressed. Students participate in off-campus didactic activities such as attendance at grand rounds at local hospitals; attendance at national, regional or local professional conferences; and augment learning with library research. Topics vary and students may repeat for credit. Prerequisite: Permission of instructor. Academic and experience in human services strongly recommended.

### PSYC 609 (1-4) Industrial/Organizational Psychology Internship

Enrollment limited to students in good standing in the industrial/organizational track.

### PSYC 610 (4) Research Design & Statistics

Research methodology and statistical procedures involving descriptive and inferential techniques for simple and multivariate situations involving parametric and non parametric variables using manual and computer methods.

### PSYC 613 (4) Behavioral Research Methodology

Covers methods for analyzing treatments and experimental (as well as quasi-experimental) manipulations that focus on the behavior of the individual subject, multiple N=1, and small group designs.

Prerequisite: PSYC 615

### PSYC 618 (4) Multivariate Analysis

Overview of multivariate statistical analyses including: multiple regression, ANCOVA, MANOVA, discriminate function analysis, and factor analysis.

Prerequisite: PSYC 610

### PSYC 621 (1) Seminar Topics I

Topics in contemporary psychology. Each instructor selects topic. Sixteen contact hours in seminar format. May be repeated for credit.

Prerequisite: permission of instructor

### PSYC 622 (2) Seminar Topics II

Topics in contemporary psychology. Each instructor selects topic. Thirty-two contact hours in seminar format. May be repeated for credit.

Prerequisite: permission of instructor

### PSYC 623 (3) Seminar Topics III

Topics in contemporary psychology. Each instructor selects topic. Forty-eight contact hours in seminar format. May be repeated for credit.

Prerequisite: permission of instructor

### PSYC 624 (4) Seminar Topics IV

Topics in contemporary psychology. Each instructor selects topic. Sixty-four contact hours in seminar format. May be repeated for credit.

Prerequisite: permission of instructor

### PSYC 633 (3) Job Analysis & Performance Appraisals

An overview of techniques used to measure employee performance. Topics include: Job analysis methods and use of results, criterion development, performance appraisal methods, rater training, bias and accuracy in performance appraisal, organizational and contextual issues.

Prerequisite: PSYC 519

### PSYC 649 (3) Behavior Theory and Philosophy

This course will be a seminar examining the philosophy of science underlying the field of behavior analysis and some of the implications of this approach to human behavior. The course is intended for graduate students in psychology. It will be based on student presentations.

### PSYC 650 (3) Schools of Psychotherapy

The major schools of psychotherapy are considered from the perspective of their philosophy of science and empirical support. Research strategies and implications for prescriptive intervention are addressed.

Prerequisite: Admittance to clinical program or consent of instructor

### PSYC 651 (4) Adult Psychopathology & Therapy

The diagnosis of adult behavior disorders using the DSM-IV classifications procedures. Behavioral case formulation is emphasized. Students develop skills in cognitive and behavioral intervention strategies.

Prerequisite: admitted to clinical master's program or permission of instructor.

### PSYC 653 (3) Behavioral Consultation

Detailed collaborative approaches to treatment and referral for mental health practitioners. Appropriate for those going into clinical, school, and counseling psychology, as well as those in special education, guidance and student personnel, and administration.

### PSYC 654 (4) Clinical Case Management

Techniques of diagnostic assessments, clinical management, and intervention applied to behavior disordered patients. This course emphasizes interviewing, report writing, and treatment planning.

Prerequisite: admitted to clinical master's program or permission of instructor

### PSYC 660 (3) Employee Selection

Overview of issues and techniques used to make hiring and promotion decisions in organizations. Topic includes: introduction of the selection process, legal and affirmative action issues, validity issues in selection, validity generalization, utility and decision making, and use of selection methods.

Prerequisite: PSYC 610

### PSYC 662 (3) Training & Development

An overview of theories and techniques used to improve employee satisfaction, employee productivity, and organizational effectiveness. Topics include: identifying problems, intervention techniques, training, determining the effectiveness of training, and intervention programs.

Prerequisite: PSYC 547

### PSYC 670 (4) Psychoneurology of Child Behavior

The purpose of this course is to inform students of the latest research in the neural bases of developmental and learning disorders. Topics include dyslexia, perceptual disorders, language disorders, disorders of executive functioning, and memory disorders.

### PSYC 677 (1-4) Individual Study

Individualized learning under faculty supervision. May be retaken for credit.

Prerequisite: 12 graduate credits

### PSYC 682 (4) Child Psychopathology & Therapy

This course presents behavioral interventions for children and adolescents who are exhibiting a variety of psychological disorders such as oppositional defiant disorder, attention deficit disorder, fears/phobias, depression, and adjustment disorders. Data-based cognitive-behavioral interventions with youths, their families, and their environments will be emphasized.

Alt E Prerequisite: PSYC 683 S

### PSYC 683 (4) Behavioral Assessment

An introduction of the basic theoretical principles and techniques of behavioral assessment in clinical psychology for targeting specific behaviors as the beginning step in treatment, and as a system for evaluating outcomes. Techniques include direct observation, self-monitoring, functional analysis, stimulus preference assessment, behavior rating scales, behavioral interviews, task analytic, and cognitive-behavioral measures.

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## PSYCHOLOGY

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### PSYC 686 (3) Clinical Assessment

This course is designed to be a comprehensive assessment course. Multiple tests will be covered in the areas of intelligence, adaptive behaviors, behavior management measures, personality, and psychopathology. The end goal of the course is competence in administering a complete battery of tests and writing a professional report on the results.

### PSYC 689 (3) Standards and Ethics

Details the principles and standards put forth by the APA to guide the profession of psychology. The course is oriented towards those going into either a career in therapy (i.e., clinical, counseling, or school psychology), research, or teaching.

### PSYC 691 (2) Clinical Practicum I

Students are placed in clinical settings under the supervision of a licensed psychologist. Placements vary among hospitals, private clinics, and county mental health agencies. Clinical Practicum I covers the first 150 clock hours of the 300 hours needed to fulfill the practicum requirement.

Prerequisite: admitted to clinical master's program OR permission of Director of Clinical Training

### PSYC 692 (2) Clinical Practicum II

Extension of Practicum I. Students complete the second 150 hours of the 300 hours of supervised practice.

Prerequisite: admitted to clinical master's program, OR permission of Director of Clinical Training

### PSYC 694 (1-2) Alternate Plan Paper

Individualized student paper based on an extensive review of literature in some area of psychology.

### PSYC 695 (2) Research in Industrial/Organizational Psychology I

Developing research proposals/projects, ethic committee review, implementing consulting projects, data collection, report writing, presentation to professional societies, and submitting funding requests.

Prerequisite: consent

### PSYC 696 (3) Research Clinical Psychology I

Students participate on laboratory teams with clinical faculty. Teams develop research proposals and write ethics committee proposals. Projects include clinical field studies, survey studies, and single subject intervention. Students are expected to present findings at meetings of professional associations.

Prerequisite: permission of instructors, Director of Clinical Training, and admission to clinical program

### PSYC 697 (2) Research in Industrial/Organizational Psychology II

Continuation of Research in Industrial/Organizational Psychology I.

Prerequisite: consent

### PSYC 698 (3) Research in Clinical Psychology II

Continuation of Research in Clinical Psychology I.

Prerequisite: Permission of instructors, Director of Clinical Training, and admission to clinical program

### PSYC 699 (3-6) Thesis

Individualized student research paper which involves a literature review and original research.

### PSYC 701 (4) Principles and Practices of School Psychology

This course will introduce school psychology doctoral students to the wide range of professional issues relevant to school psychology and provide a context for their training at Minnesota State Mankato.

### PSYC 702 (1) Field Experience I

This is a field-based course that introduces school psychology students to the K-12 school context via in-school observations and brief clinical experiences. Students complete 45 hours of field experience.

Field Experience II PSYC 703 1 This is a continuation of Field Experience I and involves an additional 45 hours of field experience.

### PSYC 705 (3) Tests and Measures in Education

This course focuses on the role that standardized tests and measures play in educational decision-making. Students also learn how to evaluate the psychometric quality of tests.

### PSYC 710 (4) Cognitive Assessment

The basic skills required to professionally administer intelligence tests are covered. Students develop initial fluency in the administration of at least two tests and are exposed to several others.

### PSYC 725 (4) Consultation and Prevention

Topics include models of consultation, the development of school and parent consultation skills, and providing educational and mental health services across all levels of prevention.

### PSYC 750 (4) School Psychology Practicum I

This is the first half of a year-long practicum placement in which students engage in a wide variety of professional school psychology practices under the supervision of a licensed practicing school psychologist. Students complete 160 hours of field experience.

### PSYC 751 (4) School Psychology Practicum II

This is a continuation of PSYC 750. Students complete an additional 160 hours of field experience in school psychology.

### PSYC 760 (2) Advanced Doctoral Practicum I

Doctoral students engage in supervised clinical experiences in a placement that will further their preferred areas of professional expertise related to school psychology. Students complete 80 hours of field experience.

### PSYC 770 (3) Child Mental Health: Assessment to Intervention

This class will focus on the application of hypothesis testing processes and a range of procedures to understand child abnormal behavior and formulate interventions. Topics include assessment procedures and application of these procedures to specific categories of psychopathology.

### PSYC 761 (2) Advanced Doctoral Practicum II

This is a continuation of PSYC 760. Students complete an additional 80 hours of field experience in school psychology.

### PSYC 775 (4) Psychological Intervention in the Schools

This class focuses on the development and implementation of specific psychological interventions in school settings following the assessment and diagnosis of specific mental health problems.

### PSYC 780 (2) Research in School Psychology

Doctoral students participate in research teams, gain experience in data collection, develop research ideas, and write research and IRB proposals.

### PSYC 795 (2-8) Internship

This 1500-hour internship is a culminating experience for the school psychology Psy.D. program. Students are placed at a site where they engage in a wide range of school psychology services under the supervision of a doctoral-level school or licensed psychologist.

### PSYC 799 (1-8) Dissertation

The dissertation is based on independent research conducted by doctoral candidates at or near the end of their course of study. The dissertation culminates in an oral defense.

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## MASTER OF PUBLIC ADMINISTRATION

*College of Social and Behavioral Sciences*

*Department of Political Science*

109 Morris Hall • 507-389-2721

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### MASTER OF PUBLIC ADMINISTRATION MPA

(Thesis Plan - 34 credits)

(Alternate Paper Plan - 34 credits)

This program is designed for persons already in or preparing to enter public service. The program is designed to enable the student to perform management or staff functions in such areas as finance, budget analysis and personnel management. Students are prepared with a knowledge of political and legal processes of government and with an appreciation for managerial decision-making skills required

by public agencies. MPA students may choose between the Thesis Plan and the Alternate Plan. The Thesis Plan requires 34 credits (including credits taken for the thesis, but not including the research tool). The Alternate Plan requires 34 (not including the research tool) credits along with the submission of an alternate plan paper written as a part of the requirements of a designated course.

#### Admission requirements

1. A minimum GPA of 3.0 on a 4.0 scale for the last 2 years of undergraduate coursework, OR; By using other factors (e.g. promising public or private sector work experience), demonstrate that the program can be successfully completed; and
2. A baccalaureate degree from an accredited college or university; and
3. All students need a reasonable background knowledge in government and quantitative methods. In some cases, the student's advisor may require that knowledge and skill deficiencies be remedied.

#### Required Core (19 credits)

Common Core Courses: 19 credits

POL 600	Research Methods (3 credits)
POL 606	Organizational Theory (3 credit)
POL 611	Orientation for Graduate Students (1 credit)
POL 622	Seminar: Theory and Practice (3 credits)
POL 628	Seminar: Public Management (3 credits)
POL 662	Human Resource Management (3 credits)
POL 663	Budget and Fiscal Management (3 credits)

#### AMERICAN ADMINISTRATION TRACK: 9 credits

##### ONE of the following (totaling 3 credits):

POL 550	Topics in Public Law (with permission)
POL 560	Topics in Public Policy/Administration (with permission)
POL 562	Collective Bargaining: Public Sector
POL 563	Public Personnel Administration
POL 570	Topics in Institutions & Process (with permission)
POL 571	Public Opinion and Polling Methods
POL 572	Urban Government
POL 573	Legislative Process
POL 574	Executive Process
POL 580	Topics in Political Methodology (with permission)
POL 660	Seminar: Public Administration
POL 670	Seminar: Public Law
POL 680	State-Urban Governance

##### and TWO of the following (totaling 6 credits):

POL 610	Seminar: American Politics
POL 650	Seminar: Ethics and Values in Administration
POL 691	Internship (with permission)

#### INTERNATIONAL ADMINISTRATION TRACK: 9 credits

##### ONE of the following: (totaling 3 credits):

POL 530	Topics in International Relations (with permission)
POL 532	International Law
POL 533	International Organization
POL 534	US Foreign Policy
POL 535	Capitalism, Nationalism and Democracy
POL 536	International Political Economy
POL 537	International Conflict Resolution
POL 539	Comparative Social Policy
POL 540	Topics in Comparative Politics (with permission)
POL 548	Political Change and Development
POL 549	Comparative Criminal Justice Systems TWO of the following: (totaling 6 credits):
POL 620	Seminar: Issues in Comparative Government and Administration
POL 630	Seminar: International Relations
POL 650	Seminar: Ethics and Values in Administration

#### Required Electives: 0-5 credits, depending on Thesis/APP credits

##### Research Tool:

POL 669	Seminar: Public Policy Analysis (3 credits) or other research-related course.
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#### Required Thesis or Alternative Plan Paper

POL 694	Alternative Plan Paper (1-2 credits)
POL 699	Thesis (3-6) credit

#### Required Proficiency in Advanced Research Methods

Students must demonstrate proficiency in an advanced research methods area. The research requirement may be satisfied by taking POLS 669 Sem: Public Policy Analysis or, with the approval of the student's advisor, by taking some other advanced research course or by demonstrating a foreign language competency. These credits may not be applied towards the master's degree.

#### Extended Learning

The program is offered through extended learning in the Twin Cities. The extended learning program and its requirements are the same as the on-campus program described immediately above. The Department is committed to offering each of the core courses at least once every two years.

#### COURSE DESCRIPTIONS

##### POL 510 (1-4) Topics in Political Philosophy

This course explores topics in political philosophy beyond what is covered in the existing curriculum. Students study specialized topics of current importance in the field. Specific topics will change depending on the term and instructor. May be retaken with change of topic.

##### POL 514 (3) Early United States Political Thought

Political thought in United States from colonial period to the Civil War. Puritans, American revolution, republicanism, debate over United States Constitution, Jacksonian Democracy, Thoreau, reformers and religious and secular utopias, women's rights, states' rights, abolitionism, proslavery.

##### POL 515 (3) Recent United States Political Thought

Political thought in United States from reconstruction to present. Controversies over industrial capitalism: Social Darwinism, Utopian Socialism, Populism, Socialism, Progressivism, Women's Rights, suffrage movement, and contemporary feminism; African American political thought: liberalism; conservatism.

##### POL 516 (3) Nonwestern Political Philosophy

This course introduces students to the political philosophies of major thinkers from Asia, Africa, and the Middle East. The course is designed to enhance students' analytical and writing skills.

##### POL 520 (1-4) Topics in Political Methods

This course explores topics in political science research methods beyond what is covered in the existing curriculum. Students study specialized topics of current importance in the field. Specific topics will change depending on the term and instructor. May be retaken with a change of topic.

##### POL 522 (3) Campaigns & Elections

Elections in the United States at the federal, state, and local levels. Election law, history, factors affecting elections, voting behavior, campaign finance, role of parties and groups, campaign strategy and tactics. Analysis of contemporary elections.

##### POL 523 (3) Political Parties

Parties in United States at the federal, state, and local levels. Cross-national comparisons. Decline and revival of parties. What parties do. Are two party systems best? Are third parties the answer? Party organization. Voting behavior. Legislative, executive parties. Minnesota focus.

##### POL 524 (3) Women & Politics

Politics impact on women: women's impact on politics and governance; primary focus on United States but some comparative considerations.

##### POL 525 (3) Terrorism & Political Violence

History, philosophy, techniques, and countermeasures to terroristic and low intensity threats to public order. Both domestic and international terror. The blurring of the lines between low intensity conflict/terrorism and multinational high intensity crime.

##### POL 526 (3) Racial and Ethnic Politics

This course examines the interrelationships between race/ethnicity and politics in the United States with a focus on African Americans, Asian Americans, Hispanics, and Native Americans: their experiences, political attitudes and behaviors, and representation in government. We will examine how some issues, including crime, welfare, and immigration have taken a racial cast, as well as white attitudes toward racial and race-related policies.

**POL 527 (3) Political Psychology**

This course examines how psychological ideas and processes (such as intergroup and intragroup relations, stereotyping and authoritarianism) illuminate concepts, theories, and principles used in understanding political life. We will explore the contributions of psychology in political arenas such as presidential greatness and character, foreign policy decision-making, political tolerance, and mass violence and genocide.

**POL 530 (1-4) Topics in International Relations**

This course explores topics in international relations beyond what is covered in the existing curriculum. Students study specialized topics of current importance in the field. Specific topics will change depending on the term and instructor. May be retaken with a change of topic.

**POL 531 (3) International Relations**

An advanced theoretical survey of the dynamics of politics and political change at the global level.

**POL 532 (3) International Law**

A study of the legal norms and institutions which influence international and transnational relations.

**POL 533 (3) International Organization**

Study of the function and process of the United Nations and other international organizations.

**POL 534 (3) United States Foreign Policy**

This course is a general overview of US foreign policy institutions, processes, and politics. US Foreign Policy is examined in historical, global, and domestic contexts.

**POL 535 (3) Capitalism, Nationalism, and Democracy**

This course explores the interaction of the three complex contemporary political and socioeconomic phenomena: the continuing expansion of global capitalism, the rise of national(s), and the new wave of democratization around the world. The following topics are covered and discussed in class, with references to specific country and regional examples, (1) the impact of international economic institutions and democratization, (2) new forms of political participation in emerging democracies, (3) cultural and ethnic determinants of democratization, (4) problems of economic inequality in new democracies, (5) social and gender issues of democratic transitions, and (6) the relationship between democratic expansion and world peace.

**POL 536 (3) International Political Economy**

Focusing on patterns, processes, and problems of international trade, monetary, technological, and investment relations, this course examines the roles played by key government organization in managing conflict and cooperation among states.

**POL 537 (3) International Conflict Resolution**

This interdisciplinary proseminar focuses on conflict resolution in the international arena. In this course, we will discuss causes of conflict, examine approaches to the study of conflict resolution, and analyze the varieties of nonviolent strategies of conflict resolution. Special emphasis will be on the role of third party mediation. Cases (settled or ongoing) will be used to reflect on and evaluate all aspects—from conflict conditions to negotiating activities and process to outcome.

**POL 538 (3) International Relations of East Asia**

An overview of the international relations of East Asia, the course examines cooperation and conflict among major powers in the area: China, Japan and the United States. Topics include Japan's pre-WWII expansionism, China's political transformation and North Korea's nuclear controversy.

**POL 539 (3) Comparative Social Policy: The Welfare State in Europe & the Americas**

This course offers a cross-national perspective on the politics of social policy and the welfare state in industrialized parts of the world, including North and South America and different regions of Europe. It also explores distinct national patterns of public policy solutions to the common contemporary problems of social security, poverty, and health care by paying close attention to both domestic factors and the forces of globalization that work to constrain government decisions. This multidimensional approach is designed to enable students to better understand how politics works in different ways to produce collective or social choices.

**POL 540 (1-4) Topics in Comparative Politics**

This course explores topics in comparative politics beyond what is covered in the existing curriculum. Students study specialized topics of current importance in the field. Specific topics will change depending on the term and instructor. May be retaken with a change of topic.

**POL 541 (3) Russia & Neighboring States Politics**

This course focuses on the Russian political system in relation to domestic social and economic environments and also on the role of Russia as a global actor. It examines the post-communist transformation in Russia and other former Soviet republics.

**POL 542 (3) South Asia: Politics & Policy**

This course introduces students to the governments and politics of the South Asian countries. The historical and cultural context of politics are explored, as well as contemporary issues.

**POL 543 (3) Middle East Politics**

This class explores the dynamics that determine politics and effect change in the region. Using a comparative perspective for the major countries in the region, we examine such issues as Islam, nationalism, resources, regional conflicts, impact of the international system, and political development.

**POL 544 (3) Latin American Politics**

This course includes a detailed analysis of select countries and theoretical concerns in Latin American studies. Its general goal is to provide students with the knowledge of Latin American politics and societies in both regional and comparative contexts.

**POL 545 (3) Asia Pacific Rim: Politics and Policy**

The course examines political processes, governmental institutions and policies of the countries of the Asian Pacific Rim, with special emphasis on China, Japan and the newly industrializing states of Southeast Asia.

**POL 546 (3) African Politics**

This course is designed to acquaint undergraduate and graduate students with key concepts and issues in the study of African politics. The historical and cultural context of politics is explored, as well as topics of current importance in the field.

**POL 547 (3) Europe: Politics & Policy**

The course discusses government institutions, political developments, and policy making structures of contemporary Europe, including the former communist countries of East/Central Europe and the Balkans. It will also cover the on-going process of European integration (European Union) and democratization of the former Soviet bloc countries. Some of the topics covered will include elections, party systems, federalism and devolution, ethnic and minority policy, social policy, economic reforms, gender, and politics and cross-Atlantic relations with the U.S.

**POL 548 (3) Political Development & Change**

This course introduces students to key issues and concepts in the study of political and economic development. Both theoretical approaches and empirical data are presented. The course is also designed to enhance students' analytical and research skills.

**POL 549 (3) Comparative Criminal Justice Systems**

A comparison of criminal justice philosophies, structures, and procedures found in various countries around the world. Same as Law Enforcement 434: Comparative Criminal Justice Systems.

**POL 550 (1-4) Topics in Public Law**

This course explores topics in public law beyond what is covered in the existing curriculum. Students study specialized topics of current importance in the field. Specific topics will change depending on the term and instructor. May be retaken with a change of topic.

**POL 551 (3) Administrative Law**

Legal procedures by which state and federal administrative agencies exercise legislative, judicial, and executive powers. Emphasis is placed on the constitutional position of administrative agencies, the rule making process, the power of agencies to decide rights and obligations concerning individual cases, and judicial control of administrative action.

**POL 552 (3) Jurisprudence**

Philosophy and sources of law. Schools of legal philosophy and types of legal thinking. Emphasis is placed on Classical Natural Law, Analytical Legal Positivism, Legal Realism and Critical Legal Studies.

**POL 553 (3) Constitutional Law**

Review of selected United States Supreme Court decisions, past and present, relating to the powers of the President, Congress, and the federal courts, as well as the division of power between the states and the federal government. Focus is on case briefing and the rationale which underlies the decisions.

**POL 554 (3) Civil Liberties**

Review of selected United States Supreme Court decisions interpreting important freedoms contained in the Bill of Rights and the 14th Amendment. Focus is on the rationale which underlies decisions and their impact on American political social processes. Provides an opportunity to exercise and develop individual analytical abilities through analysis of Court's reasoning.

**POL 555 (3) American Legal Philosophy**

Examines major schools in American legal thought from the dawn of the 20th century to the present. Our focus will lie with turn-of-the-century formalism; legal realism; the legal process school; law and economics; and critical legal studies. We will apply legal reasoning from these schools to selected controversial 20th-century Supreme Court cases on church-state issues, gay and lesbian rights, privacy rights, criminal defendants' rights and other issues as appropriate. It would be desirable if students had previously enrolled in POL 111 or the equivalent.

**POL 560 (1-4) Topics in Public Policy/Administration**

This course explores topics in public policy and public administration beyond what is covered in the existing curriculum. Students study specialized topics of current importance in the field. Specific topics will change depending on the term and instructor. May be retaken with a change of topic.

**POL 561 (3) Environmental Politics**

A study of the natural environment as a public policy issue in the political process of the United States, with some attention given to comparative and international perspectives.

**POL 562 (3) Collective Bargaining: Public Sector**

A broadly based introduction to the issues, processes, and techniques of public sector labor relations.

**POL 563 (3) Public Personnel Administration**

The development of public personnel management in federal, state, and local governments; strategic planning and policy making, position management, staffing, performance management, workplace relations.

**POL 564 (3) Aging: Policy Issues**

The public policy process and issues as related to the generations, particularly to older Americans. Focuses on the policy context as well as the specific policies and programs.

**POL 570 (1-4) Topics in Institutions & Process**

This course explores topics in political institutions and process beyond what is covered in the existing curriculum. Students study specialized topics of current importance in the field. Specific topics will change depending on the term and instructor. May be retaken with a change of topic.

**POL 571 (3) Public Opinion and Polling Methods**

This course examines public opinion in American politics. Topics include the definition, nature, and consequences of public opinion; political socialization; public opinion on selected issues; intergroup differences in public opinion, and public polling methods.

**POL 572 (3) Urban Government**

Politics of cities and metropolitan areas. Discusses the impact of race, class, gender, immigrant status issues, intergovernmental relations, and how citizens can influence urban politics.

**POL 573 (3) Legislative Process**

United States Congress and state legislatures, with some cross-national comparisons. Legislative structure, powers; districting, elections, representation, constituency relations; committee system, parties, law-making process, rules and procedure, decision-making, relations with executives and courts. Reforms.

**POL 574 (3) Executive Process**

Examination of executive politics in United States at a federal and state level, with some cross-national comparisons. United States Presidency and executive branch, governors and state executive branches, mayors, and other local executives.

**POL 575 (3) Judicial Process**

An examination of the structure, jurisdiction, and processes of federal and state courts. Emphasis is placed on selection of judges and justices and on the dynamics of judicial decision-making.

**POL 576 (3) Southern Politics**

This course examines politics in the American South. It examines the historical and cultural roots of Southern distinctiveness: traditionalistic political culture, racial conflicts, hostility toward organized labor, religious fundamentalism, tolerance of state violence, and social and moral conservatism. Major attention is paid to the realignment of white Southerners toward the Republican Party.

**POL 580 (3) Topics in Participation & Behavior**

This course explores topics in political participation and behavior beyond what is covered in the existing curriculum. Students study specialized topics of current importance in the field. Specific topics will change depending on the term and instructor. May be retaken with a change of topic.

**POL 590 (1-6) Workshop**

Selected topics. May be repeated with change of topic.

**POL 600 (3) Research Methods**

Concepts and methods of conducting applied social science research.

**POL 606 (3) Organizational Theory**

Theories and practices of complex public organizations.

**POL 610 (3) Seminar: American Politics**

This course explores topics important to the study of American politics. Specific topics may change depending on the term and instructor. May be retaken with a change of topic.

**POL 611 (1) Orientation for Graduate Student**

Orientation to graduate programs in political science and public administration to facilitate a successful experience in the programs.

**POL 620 (3) Seminar: Comparative Government**

This course explores topics important to the field of comparative politics. Specific topics may change depending on the term and instructor. May be retaken with a change of topic.

**POL 622 (3) Seminar: Theory & Practice of Public Administration**

A capstone course designed to test the student's ability to synthesize and apply information and concepts from the various areas in public administration such as budgeting, personnel administration, finance, organization theory, and policy evaluation. Ideally, this course should be taken at the end of a student's program in public administration.

**POL 628 (3) Seminar: Public Management**

An examination of modern principles and techniques of leadership and management. Emphasis is placed on the interactive style of leadership and behavioral concepts of management.

**POL 630 (3) Seminar: International Relations**

This course explores topics important to the field of international relations. Specific topics may change depending on the term and instructor. May be retaken with a change of topic.

**POL 640 (3) Seminar: Political Parties**

This course explores topics important to the study of political parties. Specific topics may change depending on the term and instructor. May be retaken with a change of topic.

**POL 650 (3) Ethics and Values in Public Administration**

This course explores topics important to the field of political theory. Specific topics may change depending on the term and instructor. May be retaken with a change of topic.

**POL 660 (3) Seminar: Public Administration**

This course explores topics important to the study of public administration. Specific topics may change depending on the term and instructor. May be retaken with a change of topic.

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## PUBLIC ADMINISTRATION

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### **POL 662 (3) Human Resource Management**

Change is the constant in today's human resource management in public organizations. The technical framework for productivity improvement and employee development is placed in the context of the legal environment. Emphasis is on managing diversity.

### **POL 663 (3) Budget & Fiscal Management**

An in depth study of public budgeting and fiscal management, with emphasis on the approaches to budgeting and background on public revenues and revenue management.

### **POL 665 (3) Seminar: Bureaucracy & Administrative Process**

An examination of law and politics in the formal and informal decision-making processes of large state and federal administrative agencies. Emphasis is placed on formal rule making and adjudicatory processes.

### **POL 669 (3) Seminar: Public Policy Analysis**

Focuses on evaluation of public policy and programs through a variety of qualitative and quantitative techniques, e.g., models, forecasting, cost-benefit analysis.

### **POL 670 (3) Seminar: Public Law**

Topics in Public Law. Subject areas will vary from semester to semester. The course may be taken up to three times as topics change.

### **POL 671 (3) Seminar: Police Administration/Policy**

Topics such as administrative philosophies, organizational structures, ethics, policy formation and implementation, discipline, productivity and staff development. May be repeated for up to nine credits as topics change.

### **POL 680 (3) Seminar: State-Urban Governance**

This course explores topics important to the study of state and urban government and governance. Specific topics may change depending on the term and instructor. May be retaken with a change of topic.

### **POL 691 (1-8) Internship**

Field placement with a governmental agency or related organization. Provides a learning experience in which the student can integrate and apply knowledge and theory derived from curriculum.

Prerequisite: consent of advisor

### **POL 692 (1-5) Individual Study**

Advanced study and research on topics not currently available in existing courses. May be repeated with a change of topic. Requires advisor and instructor approval of topic.

### **POL 694 (1-2) Alternate Plan Paper**

For those choosing to write an alternate plan paper.

### **POL 695 (1-3) Topics in Public Administration**

This course explores topics important to the study of public administration. Specific topics may change depending on the term and instructor. May be retaken with a change of topic.

### **POL 699 (3-6) Thesis**

For those choosing to write a thesis.

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## RECREATION, PARKS AND LEISURE SERVICES

*College of Allied Health and Nursing*

*Department of Recreation, Parks and Leisure Services*

213 Highland Center N • 507-389-2127

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Recreation, Parks and Leisure Services graduate students may develop a recreation core within the Cross-disciplinary Studies Master of Science degree program. For more information on this program, please refer to the Cross-disciplinary Studies program.

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## COURSE DESCRIPTIONS

### **RPLS 547 (3) Programming in Therapeutic Recreation**

This course details the Therapeutic Recreation process: assessment, planning, implementation, and evaluation in relation to individual treatment programs in Therapeutic Recreation Service. Emphasis is on interpreting assessment data, writing measurable goals and objectives, implementing an actual program, and documenting program results in terms currently used in human service settings.

Prerequisite: RPLS 274

### **RPLS 550 (3) Therapeutic Recreation Techniques**

This course is designed to teach a wide variety of interventions and facilitation techniques used in therapeutic recreation programs to give the student knowledge, practice, and ability in the implementation of leisure and recreation programs for persons with special needs.

Prerequisite: RPLS 274 and 447

### **RPLS 562 (2) Readings in RPLS**

Exploring topics and authors in the field of recreation, parks, and leisure services, analyzing and synthesizing the information.

### **RPLS 565 (3) Event Management**

This course introduces students to special event planning, development, budgeting, promotion, and evaluation. The use, recruitment, evaluation and recognition of volunteers as well as fund raising strategies are discussed and employed.

Prerequisite: RPLS 377

### **RPLS 571 (3) Research Design in RPLS**

This course guides the student through the survey process, including the creation and implementation of a questionnaire. The data collected are then analyzed and a formal report, including a review of literature, is prepared. Computer skills are emphasized.

Prerequisite: COMS 100

### **RPLS 573 (3) Administration of Leisure Time Programs**

Development of approaches in staffing, planning, organization, coordination, evaluation, and directing programs and personnel.

### **RPLS 574 (2) Camp Administration**

Overview of administration functions in resident camps and day camp settings.

### **RPLS 575 (3) Public Land Use Policies**

Traces the history of public lands in the United States, their acquisition and disposal. Congressional charges to executive agencies managing national lands and state and local government responsibilities for managing non-federal public lands. Attention is given to international oceanic resources and how the international community will manage these resources.

### **RPLS 576 (3) Recreation Vehicular Safety**

This course covers the ever-expanding mechanized leisure experience field with emphasis upon laws and regulations governing the utilization of the resource base, legal and ethical use of equipment in today's complex society. Utilization of maintenance equipment in leisure-oriented facilities is stressed.

### **RPLS 577 (3) Commercial Recreation & Tourism**

This course traces the evolution of commercial recreation and tourism, which has become the world's number one industry. Cultural, economic, geographic, and political forces will be examined as to their role in this rapidly expanding area.

### **RPLS 581 (3) Park Systems & Planning**

Traces the history of the parks movement in the United States, selected legislation establishing parks, and the enactment of funding legislation. The importance of public participation, planning and political strategies are stressed.

### **RPLS 582 (3) Leisure and Older Adults**

Leisure as an integral aspect of successful aging is the focus of this course which includes: leisure in relation to physical, intellectual, social, and psychological aspects of aging and successful leisure programming in community based settings and in long term care.

### **RPLS 583 (3) Legal Processes in Recreation, Parks, and Leisure Services**

This course consists of an overview of legislation that directly or indirectly affects

recreation, parks, and leisure services past and present, public and private. Students will become participants in the process at several points during the semester.

#### RPLS 585 (1-3) Selected Topics

#### RPLS 589 (3) Clinical Aspects of Therapeutic Recreation

This course is designed to develop student's ability to function as a member of the interdisciplinary treatment team and practice critical thinking, writing, and oral skills related to treatment decisions, ethical issues, professional issues, and health care delivery systems. Prerequisite: RPLS 274 and 547; EDFN 235 Human Development

#### RPLS 590 (2-4) Workshop

#### RPLS 591 (1-6) In-Service

Special offering for recreation, parks, and leisure services personnel in a variety of service-oriented areas.

#### RPLS 610 (2) Programming Leisure Time Activities

Planning leisure-time programs to meet the contemporary needs of a variety of client groups. Students will develop their personal and professional philosophy towards provision of leisure services. Various planning techniques incorporating concepts of building community coalitions and emphasizing collaboration and synergism will be emphasized.

#### RPLS 620 (3) Field Research Project

Research pursued within a recreation, parks, and leisure services agency or program.

#### RPLS 677 (1-6) Individual Study

Opportunity for advanced independent study and research designed by student and faculty advisor.

#### RPLS 691 (1-6) In-Service

#### RPLS 694 (1-2) Alternate Plan Paper

#### RPLS 697 (1-6) Internship

Field experience focused on development of competencies in recreation, parks, and leisure service settings. For majors only.

#### RPLS 699 (3-6) Thesis

## REHABILITATION COUNSELING MS

*College of Allied Health and Nursing  
Department of Speech, Hearing, and Rehabilitation Services  
103 Armstrong Hall • 507-389-1414*

Master's level training in Rehabilitation Counseling prepares students for employment as counselors who provide services to individuals with a wide range of different disabling conditions and disabilities. Graduates of this nationally accredited (CORE) program work in federal, state, and not-for-profit community agencies, as well as business and industry settings in the for-profit sector.

Rehabilitation counseling involves integration of the client's life situation including personal, family, medical, psychological, social and career factors. In addition to counseling, rehabilitation counselors typically provide case management and case coordination services, working jointly with clients to access a variety of resources and services that are relevant to the individual's rehabilitation goal(s). Rehabilitation counselors frequently work in interdisciplinary relationships and team with other professional specialists such as physicians, therapists, psychologists, social workers, educators, vocational evaluators, job placement specialists, and employers.

This 48 credit program allows open entry (students can begin any academic term), but is structured for students who begin in the fall to graduate after approximately two years of full-time enrollment. Classes are conducted on Wednesdays and Fridays and part-time study is an option for students who intend to complete the program in more than two years. Completion of a 900 hour internship in a rehabilitation

agency or a similar social service setting is generally the final requirement for graduation. In many instances students are able to obtain paid internships. Upon, or close to completion of the program, graduates are eligible to sit for the national certification (CRC) examination. Demand for master's level rehabilitation counselors is strong and graduates have a very good employment outlook in the profession of rehabilitation counseling.

**Admission.** Majors in this degree program are admitted upon application of the College of Graduate Studies and Research based upon GPA from the last 90 credits from a quarter system or 60 credits from a semester system of undergraduate work and/or graduate level work completed after earning an undergraduate degree, but prior to applying to this program. Generally, a 3.0 GPA on a 4.0 scale is required, although students with less than a 3.0 GPA can request consideration for admittance on a provisional basis.

In addition to being admitted by the College of Graduate Studies and Research, applicants must be recommended for admission by faculty of the Department. Faculty recommendations will be based upon the applicant's 300-500 word Statement of Purpose and the applicant's three Letters of Recommendation which are provided by a combination of academic and professional sources. In some instances, applicants may be asked to participate in an interview or additional selection procedures. Priority for admission will be provided to those applicants who are applying to begin in the fall semester and whose application materials are received by March 1st, prior to the fall semester in which the applicant intends to begin the program. Other applicants will be considered if program vacancies exist. Full-time or part-time study are equally encouraged, based on student needs or preferences.

**Financial Aid.** Students are referred to the Minnesota State Mankato Office of Financial Aid where information on financial aid resources can be provided. In some instances scholarships of varying amounts are available to Rehabilitation Counseling students. Program faculty will keep students informed of available scholarship opportunities. Some Rehabilitation Counseling students also obtain Graduate Assistant appointments in the Department or in other campus settings such as the Cultural Diversity Program, the Office of Disabled Students Services, the Learning Center, and others. Inquiries about Graduate Assistantships should be directed to the College of Graduate Studies and Research.

## REHABILITATION COUNSELING MS

(Thesis, Alternate Plan Paper or Portfolio - 48 credits)

### Required Core

REHB 612	Foundations of Rehabilitation (3)
REHB 617	Medical Aspects of Disability (3)
REHB 619	Psychosocial Aspects of Disability (3)
REHB 625	Research and Issues in Rehabilitation (3)
REHB 640	Theory in Rehabilitation (3)
REHB 651	Rehabilitation Counseling Techniques (3)
REHB 661	Case Management in Rehabilitation (3)
REHB 681	Vocational Measurement and Evaluation Techniques (3)
REHB 688	Career Planning and Development in Rehabilitation (3)
REHB 692	Rehabilitation Counseling Practicum (3)
REHB 698	Internship

### Required Elective

Elective in Cultural Diversity or Cultural Pluralism (graduate level course(s) selected by student in consultation with an advisor)

### Research Portfolio

Most Rehabilitation Counseling students produce a Research Portfolio that is developed over the period of time that the student is completing coursework. The Research Portfolio usually serves as an alternative to a Thesis or Alternate Plan Paper. Any student who desires to complete a Thesis or Alternate Plan Paper has the option to do so, in consultation with the academic advisor.

## COURSE DESCRIPTIONS

### REHB 524 (3) Rehabilitation of the Chemically Dependent

Exploration and development of research and entry-level skills in diagnosis, treatment planning, service provision, and after-care with chemically dependent persons, particularly those with co-existing physical and mental conditions.

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## REHABILITATION COUNSELING

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### REHB 590 (1-2) Workshop

### REHB 612 (3) Foundations of Rehabilitation

Rehabilitation principles practices, philosophy, and history of rehabilitation will be addressed in various settings. Trends, legislation, and service delivery systems will be investigated. (Fall)

### REHB 617 (3) Medical Aspects of Disability

Basic medical information essential to understanding the functional limitations and rehabilitation implications of individuals with disabling conditions. Information on the etiology, prognosis, potential complications, treatment procedures, rehabilitation strategies, and vocational implications will be addressed with respect to a representative sample of disabling conditions. In addition, an introduction to medical and therapeutic services, restorative techniques, and some medical terminology will be provided. (Fall)

### REHB 619 (3) Psychosocial Aspects of Disability

Overview of the psychological and social aspects of disability with an emphasis on diversity of experience among individuals with disabilities and their families. The impact of social and psychological aspects of disability on public attitudes, public policy, and law will be examined. The adjustment process experienced by individuals with disabilities and their families will be examined from the perspective of the personal and social context in which adjustment occurs. (Fall)

### REHB 625 (3) Research & Issues in Rehabilitation

Critical review of recent research findings and related practices in rehabilitation and allied disciplines. (Spring)

### REHB 640 (3) Theory in Rehabilitation

Beginning theory and related techniques of counseling and vocational development are presented utilizing lecture and role play to convey key concepts in rehabilitation counseling.

### REHB 651 (3) Rehabilitation Counseling Techniques

Applied theory and techniques in rehabilitation counseling are presented, including specific applications to various disabilities in both groups and individual practice. Interactions are required in addition to regular class meetings.

### REHB 661 (3) Case Management in Rehabilitation

The student is involved in all phases of interviewing, counseling, diagnosis, assessment, planning, and analysis, transferable skills analysis, and integration of the knowledge and skills required of practicing rehabilitation counseling.

### REHB 670 (3) Foundations of Forensic Rehabilitation Consultation

Roles and functions of rehabilitation professionals who provide expert opinion or consultation services in litigation. Overview of types of relevant litigation: worker's compensation; personal injury; professional malpractice; catastrophic injury; and others. Legal terminology. Establishing forensic consultation practice.

### REHB 672 (3) Law and the Forensic Rehabilitation Consultant

Legal procedures, precedents, venues applying to forensic rehabilitation consultation. Qualifications under Daubert and Kumho. Ethical practices, admissibility, rules of evidence, discovery, deposition and trial testimony, direct/cross examination, detailed coverage of areas of litigation requiring rehabilitation opinions and consultation.

### REHB 674 (3) Socioeconomic Costs of Acquired Disability

Socioeconomic impact of acquired disabilities on individuals, their families, and estates. Data sources and models for determining damages of lost earnings, fringe benefits, household services, consortium, Life Care Plans. Assumptions, methods, reliability and validity of data, acceptable standards of practice.

### REHB 676 (3) Case Analysis and Opinion Development

Application of structured model for critical review of forensic opinions of forensic rehabilitation consultants. Current issues in the use of transferable skills analysis, commercial software, D.O.T. and O\*NET, labor market information, Life Care Plans, and others.

### REHB 677 (1-4) Individual Study

A project performed, with prior approval, under the close supervision of a faculty member. Prerequisite: permission

### REHB 678 (3) Providing Rehabilitation Opinion: Case Simulation

Case simulation in which all steps in determining a rehabilitation expert opinion are covered; retention by attorney through delivery of testimony at deposition and/

or trial. Selected case simulations used from personal injury, catastrophic injury, and other areas of litigation.

### REHB 681 (3) Vocational Measurement and Evaluation Techniques

Through readings and by taking and administering diverse tests, the student will gain knowledge of the theory and methods of test construction, appropriateness of individual tests, and practical applications of measurement and evaluation.

### REHB 688 (3) Career Planning and Development in Rehabilitation

Overview of career development theories. Relates career development to the challenges and barriers associated with disability. Employment development, job seeking and job retention factors that pertain to employment, and career planning for individuals with disabilities who participate in rehabilitation programs are examined.

### REHB 691 (1-6) Inservice

### REHB 692 (3) Rehabilitation Counseling Practicum

Provides the student with an individualized learning opportunity related to development and enhancement of direct counseling competencies through supervised, applied counseling experience in a public or private agency that provides counseling and related rehabilitation services to individuals with disabilities. Enrollment in the rehabilitation counseling practicum requires successful completion (grade "B" or better) of REHB 651 - Rehabilitation Counseling Techniques or comparable counseling competence as demonstrated by a method determined through academic advisement. Typically, the rehabilitation counseling practicum will be completed prior to enrollment in the rehabilitation counseling internship or through academic advisement, concurrently with initiation of the internship.

### REHB 694 (1-2) Alternate Plan Paper

Writing a paper utilizing substantial bibliographic research under the direction of a faculty member.

Prerequisite: permission

### REHB 698 (1-15) Internship

The student provides a comprehensive array of professional rehabilitation services, including counseling and case management services at an accredited rehabilitation agency, facility, or program under the coaching of a qualified counselor-coach and university supervisor before entering professional employment.

Prerequisite: permission

### REHB 699 (3-6) Thesis

Performance of a formal research paper under the direction of a graduate faculty member.

Prerequisite: permission

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## SCHOOL HEALTH EDUCATION MS

(DISCIPLINE-BASED)

*College of Allied Health and Nursing*

*Department of Health Science*

213 Highland Center N • 507-389-1527

See HEALTH SCIENCE

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## SCIENCE EDUCATION MS

(DISCIPLINE-BASED)

*College of Science, Engineering and Technology*

The Master of Science in Science Education is a program for students who wish to further their knowledge in a multidisciplinary manner within the science areas. The program offers flexibility for the junior high school and high school science teacher who desires a broad background in the sciences.

Teaching licensure is a prerequisite to pursuing this degree, which is for teachers interested in enrichment in a teaching area. This degree does not lead to initial teaching licensure. Students who desire initial licensure should consult the Master of Arts in Teaching (MAT) program. Please see the section concerning the MAT program that is listed in this bulletin.

**Admission.** Students must meet the admission requirements of the College of Graduate Studies and Research, and submit two letters of recommendations (one of which is their current principal or superintendent). The GRE is required.

**Financial Assistance.** Students are encouraged to contact an advisor about the availability of financial assistance through various science departments or Cultural Diversity assistantships.

## SCIENCE EDUCATION MS

### (Discipline-Based)

(Thesis Plan - 30 credits)

(Alternate Plan Paper - 34 credits)

### Required Science Core (24 credits)

The program requires a minimum of 24 credits in science. The science credits, selected with the aid of an advisor, may be from the areas of astronomy, biology, chemistry, earth science, geology, mathematics, physics or environmental sciences. Credits must be earned in at least three of these disciplines with a minimum of 12 credits in one area. Within this program students may choose the thesis or the alternate plan.

### Required Professional Education (6 credits)

Choose 6 credits of professional education courses in consultation with an advisor.

### Required Thesis or Alternate Plan Paper

Students may elect to complete the thesis or alternate plan paper in any of the science areas listed above with the approval of their advisor.

694 – Alternate Plan Paper (1-2)

699 – Thesis (3-6)

In the alternate plan students must earn a minimum of 34 credits plus meet the alternate paper requirements outlined by their grad committee.

## SOCIAL WORK

*College of Social & Behavioral Sciences*

*Department of Social Work*

358 Trafton Science Center N • 507-389-6504

The Master of Social Work (MSW) curriculum has been carefully developed based upon our mission, goals, and objectives. We give particular attention to the requirements of our accrediting body (CSWE) as well as the perceived needs of graduate students and of our institution. Students are required to proceed through the curriculum as it is sequenced below. The program is based upon a full-time graduate credit load and does not have a part-time option.

Students in the Traditional (TR) MSW program are required to complete 60 credit hours over two calendar years. During the first year students complete 11 credits in fall and spring semesters and 8 credits in the summer semester. During the concentration year students complete 8 required credits in the fall, 11 credits in the spring, and 8 credits in the final summer semester. In addition students must complete 3 elective credit hours, typically taken during one of the summer semesters or fall semester of the concentration year. The TR program includes 40 credit-hours of classes and two 10-credit field education placements in a supervised practicum. The first and second year practicums each run from January through July.

Students in the Advanced Standing (AS) MSW program are required to complete 32 credit hours over one calendar year, beginning with a 2-credit seminar in the summer, followed by 8 required credits in the fall, 11 credits in the spring, and 8 credits in the final summer semester. In addition students must complete 3 elective credit hours, typically taken during one of the summer semesters or fall semester. The AS program includes 22 credit hours of classes and one 10-credit field education placement in a supervised practicum. The practicum runs from January through July.

### Foundation Year (Traditional, 2-year)

#### Fall Semester

SOWK 601 Foundations of Generalist Practice I (3)

SOWK 603 Human Behavior in the Social Environment I (3)

SOWK 605 Social Welfare Policy and Services (3)

SOWK 607 Professional Competence Seminar I (2)

### Spring Semester

SOWK 611 Foundations of Generalist Practice II (3)

SOWK 613 Human Behavior in the Social Environment II (3)

SOWK 615 Foundation Practicum & Seminar I (5)

### Summer Semester (Traditional 2-Year only)

SOWK 625 Foundation Practicum & Seminar II (5)

SOWK 629 Foundations of Applied Social Work Research (3)

### Summer Semester (Advanced Standing Students Only)

SOWK 650 Advanced Standing Preparation Seminar (2)

### Concentration Year (All students)

#### Fall Semester

SOWK 651 Advanced Social Work Practice with Individuals (3)

SOWK 657 Professional Competence Seminar II (2)

SOWK 669 Advanced Social Work Evaluation (3)

#### Spring Semester

SOWK 655 Social Welfare Policy Practice (3)

SOWK 660 Advanced Social Work Practice with Couples, Families & Groups, (3)

SOWK 665 Advanced Practicum and Seminar I (5)

#### Summer Semester

SOWK 661 Advanced Social Work Practice Administration (3)

SOWK 675 Advanced Practicum and Seminar II (5)

**Elective:** The 3 credit elective requirement is typically taken during one of the summer sessions or during the fall of the concentration year. Please check with program for a list of approved electives.

## COURSE DESCRIPTIONS

### SOWK 512 (3) Social Welfare Issues & Policies

(Not an elective for MSW students.)

This course provides exploration of the interrelatedness of social services, social policy formation and analysis, and social work practice.

### SOWK 515 (3) Child-Family Welfare Services

This course examines social services designed to facilitate child development and family functioning, including child protection, foster care, adoption, family preservation.

### SOWK 519 (3) Social Work and Aging

This course examines issues, resources, and processes in working with the elderly and their families in the social service system.

### SOWK 520 (3) Women's Issues in Social Work

This course explores women's concerns as clients and workers in the social service system.

### SOWK 522 (3) Social Work and Chemical Dependency

This course is designed to provide upper level students with a comprehensive introduction to the epidemiology, etiology, history, policy, and treatment modalities of substance abuse from a person-in-environment and systems theory social work perspective.

### SOWK 525 (3) Social Work Health Care Setting

This course examines social service delivery issues and skills for working in hospitals, nursing homes, and community health programs.

### SOWK 527 (3) Social Work and Domestic Violence

The overall goal of this course is to enable students to understand the rationale for and application of a variety of intervention strategies for the prevention and intervention of domestic violence.

### SOWK 530 (3) Social Work in the School Setting

This course examines service delivery issues, knowledge and skills for providing social services within school settings.

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## SOCIAL WORK

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### **SOWK 532 (3) Social Work and Disabilities**

This course focuses on service delivery issues and skills, using a strengths-based, family systems, and empowerment approach for working with individuals with developmental and other disabilities and their families across the life span. Students hoping to do a practicum in a disability services setting should complete this course prior to beginning the practicum.

### **SOWK 565 (3) Analyzing the Small Community**

(Not an elective for MSW students.)

Community study, application of research techniques; student-conducted research and analysis using a community setting.

### **SOWK 569 (3) Applied Social Work Research**

(Not an elective for MSW students.)

This course examines research issues and techniques typically used in social science research, including needs assessment, program evaluation, and practice evaluation.

### **SOWK 585 (1-6) Selected Topics**

Topics announced when offered.

### **SOWK 590 (1-3) Workshop**

### **SOWK 601 (3) Foundations of Generalist Practice I**

This course presents foundation knowledge, values and skills for generalist social work practice at multiple systems levels, emphasizing individuals, families and treatment groups. Students obtain an understanding of the history, purpose and scope of the social work profession.

### **SOWK 603 (3) Human Behavior in the Social Environment I**

This course focuses on theories and knowledge which guide social work practice, emphasizing systems theory, person-in-environment perspective, strengths perspective, and oppression theory. Students also examine theories of individual and family development across the lifespan.

### **SOWK 605 (3) Social Welfare Policy and Services**

The course provides students with an overview of the historical and contemporary social services system and an exploration of the interconnectedness between social welfare policies, social services and social work practice, with an emphasis on oppressed populations.

### **SOWK 607 (2) Professional Competence Seminar I**

The course helps prepare students for culturally and ethically competent social work practice. Students examine the many facets of diversity, learn models for culturally competent social work practice, and analyze ethical dilemmas from a social work ethics and value-base.

### **SOWK 611 Foundations of Generalist Practice II (3)**

This course presents foundation knowledge, values and skills for generalist social work practice with task groups, organizations and communities. The course will emphasize community level social work practice, focusing on strategies for community assessment, development and change.

### **SOWK 613 (3) Human Behavior in the Social Environment II**

Building on SOWK 603 HBSE I, this course examines theories and knowledge focusing on groups, organizations, communities, societies, and economic systems. Students explore the ways mezzo and macro level systems impact individual, family and societal well-being.

### **SOWK 615 (5) Foundation Practicum and Seminar I**

Foundation Practicum and Seminar I provide students with the opportunity to integrate social work theory and practice knowledge, values, and skills through direct practice with individual clients, families, groups, agencies, and communities.

### **SOWK 625 (5) Foundation Practicum and Seminar II**

Foundation Practicum and Seminar II is a continuation of SOWK 615. Students integrate social work theory and practice knowledge, values, and skills through direct practice with individual clients, families, groups, agencies, and communities.

### **SOWK 629 (3) Foundations of Applied Social Work Research**

This course enables students to understand the rationale for and application of quantitative and qualitative research techniques commonly used in generalist social work practice. Students will become more skilled at reading and critically

evaluating research studies, including studies that are designed to empirically test theory, as well as in conducting independent research. Students will understand how issues of diversity are applicable to conducting and evaluating research and to engaging in effective, culturally competent social work practice. Students will also recognize the values, ethical issues, and social and economic justice issues that underlie research with an emphasis on social work research.

### **SOWK 650 (2) Advanced Standing Preparation Seminar**

This seminar helps students admitted to the Advanced Standing MSW program refine their professional self-identity as generalist social workers and reviews foundation curriculum content to ensure that students are ready for the concentration year of the advanced generalist MSW program.

### **SOWK 651 (3) Advanced Social Work Practice with Individuals**

This course provides students with advanced generalist theories, knowledge, values, and skills for competent, ethical and evidence-based direct social work practice with individuals from diverse backgrounds.

### **SOWK 655 (3) Social Welfare Policy Practice**

This course is designed to provide students with knowledge, values and skills to engage in macro level advanced policy practice in organizations and communities in order to promote social and economic justice. This course will focus on policy issues relevant to rural and small communities.

### **SOWK 657 (2) Professional Competence Seminar II**

Building on SOWK 607, this course utilizes a case study approach to develop advanced skills in applying principles of ethical decision-making and cultural competence to practice with individuals, families, groups, organizations, and rural and small communities.

### **SOWK 660 (3) Advanced Social Work Practice with Couples, Families & Groups**

This course provides students with advanced generalist theories, knowledge, values, and skills for evidence-based direct practice with couples, families, and treatment groups.

### **SOWK 661 (3) Advanced Social Work Practice Administration**

This course provides students with advanced generalist practice knowledge, values and skills for administrative social work practice. Students develop knowledge and skills in personnel management, grant writing, resource development, budgeting, leadership, and other aspect of administering effective social service agencies.

### **SOWK 665 (5) Advanced Practicum and Seminar I**

Advanced Practicum and Seminar I provides students with the opportunity to integrate foundation and concentration social work theory and practice knowledge, values, and skills through direct practice with individual clients, families, groups, agencies, and communities.

### **SOWK 669 (3) Advanced Social Work Evaluation**

This course provides students with advanced generalist knowledge, values, and skills for both direct social work practice evaluation and program evaluation. Students develop and implement a "capstone" integrative evaluation project in conjunction with SOWK 675 Advanced Practicum and Seminar II.

### **SOWK 675 (5) Advanced Practicum and Seminar II**

Advanced Practicum and Seminar II is a continuation of SOWK 665. Students integrate foundation and concentration social work theory and practice knowledge, values, and skills through direct practice with individuals, families, groups, agencies, and communities.

### **SOWK 677 (1-3) Individual Study**

Under faculty mentorship, students may pursue in-depth library or field research on topics of their choice.

### **SOWK 694 (2) Alternate Plan Paper**

Individual research.

Prerequisite: grad school approval

### **SOWK 697 (1-10) Internship: Social Work**

Internship in approved social agency.

**SOCILOGY MA****SOCILOGY: CORRECTIONS MS****SOCILOGY: HUMAN SERVICES PLANNING & ADMINISTRATION MS**

College of Social and Behavioral Sciences  
 Department of Sociology and Corrections  
 113 Armstrong Hall • 507-389-1561  
 Fax: 507-389-5615  
[www.mnsu.edu/dept/soccor/web/sc.html](http://www.mnsu.edu/dept/soccor/web/sc.html)

Sociology and Corrections offers graduate work leading to the Master of Arts in Sociology and the Master of Science in Sociology: Corrections and Sociology: Human Services Planning and Administration. All of these programs emphasize flexibility and individual attention by a broadly trained faculty with a diversity of interests and a commitment to real-world problems and solutions.

**General Admission Requirements.** Students must meet the general admission requirements of the College of Graduate Studies and Research to be admitted to their program.

**General Admission Requirements for the Department of Sociology and Corrections.** In addition to courses specific to each program, admission to the graduate programs in this department require a grade point average of 2.75 on a 4.0 scale for the undergraduate degree. Applicants are also expected to submit

- 3 letters of reference
- a resume or curriculum vitae
- a statement of purpose
- a sample of written work

Students not meeting the requirements may be admitted conditionally; such conditions to be determined by the program admission committee. Forms for the recommendations are available from the department. The application and transcripts should be sent to the College of Graduate Studies and Research. The letters of recommendation, curriculum vitae or resume, statement of purpose, and writing sample should be sent directly to the Department of Sociology and Corrections.

**Admission to the Sociology MA program.** In addition to the general admission requirements noted above, admission to the Sociology MA program requires 24 quarter credits or 18 semester credits of sociology including courses in sociological theory, research methods and statistics

**Admission to the Sociology: Corrections MS program.** In addition to the general requirements noted above, admission to the Sociology: Corrections MS program requires 24 quarter credits or 18 semester credits in the social and behavioral sciences including courses in sociology, criminology, penology and research methods or statistics.

**Admission to the Sociology: Human Services Planning and Administration MS program.** In addition to the general admission requirements noted above, admission to the Sociology: Human Services Planning and Administration MS program requires 24 quarter credit hours or 18 semester credit hours of social and behavioral sciences courses.

**SOCILOGY MA**

(Thesis Plan - 33 credits)

The Master of Arts in Sociology is designed for the person seeking a comprehensive, sociological understanding of the social world. The program strongly emphasizes the diversity of sociological theories and research methodologies. Upon this foundation, the program provides an in-depth apprenticeship in the discipline of sociology by combining core courses, diverse subject areas, and the opportunity for intensive academic specialization. This program can be effectively used as a terminal degree by those who choose to pursue careers in applied settings. It is also ideally suited for those planning on advanced graduate training and a career in teaching and research.

**Required Core (18 credits)**

SOC 602	Seminar in Social Organization (3)
SOC 603	Seminar in Social Psychology (3)
SOC 604	Seminar in Sociological Statistics (3)
SOC 605	Seminar in Research Methods (3)
SOC 606	Seminar in Sociological Theory (3)
SOC 699	Thesis (3)

**Required Electives (15 credits)**

Any 500/600 level elective courses selected in consultation with an advisor.

**Sociology MA: College Teaching Emphasis**

**This program has yet to be formally approved by the MnSCU Chancellor's Office.**  
 (Thesis Plan – 36 credits)

The Master of Arts Sociology: College Teaching is designed for students planning an academic career. MA graduates are eligible for most academic appointments at the community college level. This degree emphasis also provides ideal preparation for students planning to seek a Ph.D. and an academic career at the college or university level. It requires a minimum of 36 credits with a minimum of 32 graduate credits in sociology and a minimum of 3 graduate credits in Education.

**Required Core (21-24 credits):**

SOC 602	Seminar in Social Organization? (3)
SOC 603	Seminar in Social Psychology? (3)
SOC 604	Seminar in Sociological Statistics? (3)
SOC 605	Seminar in Research Methods? (3)
SOC 606	Seminar in Sociological Theory (3)
SOC 696	Internship: College Teaching (3-6)
SOC 699	Thesis (3)

**Required Elective Education courses (3-4 credits):**

Choose one of the following from the Department of Educational Studies:

KSP 676	Adult Development and Learning (4)
KSP 678	Curriculum Design, Assessment, and Evaluation (4)
KSP 670	Collegiate Institutions in the United States (3)
KSP 671	Learning and Teaching in Higher Education (3)

**Elective Sociology Courses (8 - 12 credits)**

Sociology courses at the 500 or 600 level with approval of advisor.

**SOCILOGY: CORRECTIONS MS**

(Thesis Plan - 33 credits)

(Alternate Plan Paper – 34 credits)

The Master of Science in Sociology: Corrections is designed for a person seeking a leadership role in the active critique and transformation of corrections practice. A graduate of this program will have dedication to the application of the sociological perspective to correctional practices, a thorough understanding of the correctional system, a commitment to improving the justice system, and the ability to facilitate and maintain necessary processes for change. The graduate of this program is further expected to promote a commitment to the principles of social justice, respect, tolerance, dignity, and worth of all persons within corrections and the community at large.

**Required Core (21 credits)**

COR 559	Issues in Corrections (3)
SOC 602	Seminar in Social Organization (3)
SOC 603	Seminar in Social Psychology (3)
SOC 605	Seminar in Sociological Research (3)
SOC 606	Seminar in Sociological Theory (3)
SOC 607	Program Evaluation (3)
COR 647	Correctional Theory & Practice (3)

**Required Electives (9-11 credits)**

Any 500/600 level Elective courses selected in consultation with an advisor. A list of approved electives is available in the department.

Required Thesis or Alternate Plan Paper	
COR 694	Alternate Plan Paper (1-2)
COR 699	Thesis (1-3)

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## SOCIOLOGY

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### SOCIOLOGY:

#### HUMAN SERVICES PLANNING AND ADMINISTRATION MS

(Thesis Plan - 33 credits)

(Alternate Plan Paper – 34 credits)

The Master of Science in Sociology: Human Services Planning and Administration is designed for a person seeking a leadership role as an administrator in the field of human services. The graduate of this program will have a solid grounding in the knowledge, values, and skills appropriate for a broad range of human services programs. The program especially encourages creative and critical thinking skills which enable the graduate to produce positive changes in organizations.

#### Required Core (21 credits)

SOC 517	Program Administration (3)
SOC 566	Program Planning (3)
SOC 602	Seminar in Social Organization (3)
SOC 603	Seminar in Social Psychology (3)
SOC 605	Seminar in Sociological Research (3)
SOC 606	Seminar in Sociological Theory (3)
SOC 607	Program Evaluation (3)

#### Required Electives (9-11 credits)

Any 500/600 level Elective courses selected in consultation with an advisor.

Required Thesis or Alternate Plan Paper

SOC 694 Alternate Plan Paper (1-2)

SOC 699 Thesis (1-3)

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## COURSE DESCRIPTIONS

### SOCIOLOGY

#### SOC 502 (3) Medical Sociology

Introduces students to central topics in medical sociology including social factors responsible for health outcomes, social construction of health and illness health inequalities, evolution of the social institution of medicine, and/or issues related to race/ethnicity, social class and gender.

#### SOC 504 (3) Sociology of Aging

Social and social-psychological forces in later life. Problems and prospects of growing old in the United States.

#### SOC 505 (3) Sociology of Death

Study of the structure of human response to death, dying, and bereavement in their socio-cultural, interpersonal, and personal context. Formation of children's perception of death, functions of the funeral, euthanasia, and suicide are among the topics to be discussed.

#### SOC 506 (3) Applied Sociology

Applying sociology to create a career and make the world a better place. Explores how to investigate and implement solutions to problems of social process and social organization in workplace or other settings including community agencies, government, business, and other social institutions.

#### SOC 507 (3) Population Dynamics

The course will acquaint students with dynamic forces operating in the field of population and development. Includes an introduction to basic theories and techniques of population analysis, with coverage of global economic forces: fertility, morality, and migration. The causes and consequences of overpopulation are discussed with special attention to resource depletion and food shortages.

#### SOC 508 (3) Family Life Dynamics

An overview and analysis of major aspects of the American family, including cohabitation, mate selection, parenting, and changes in marriage, family, and sex role dynamics since 1970.

#### SOC 509 (3) Family Violence

Examines various forms of family violence, including dating violence, spouse abuse, and child abuse; reviews social theory and empirical research and explores social policy, appropriate responses, and possible solutions.

#### SOC 517 (3) Program Administration

Implications of sociological knowledge for the administration of Human Services

programs. Theoretical and practical aspects of administration with the social service systems.

#### SOC 523 (3) Complex Organizations

Analysis of the development, structure, and functioning of social processes in large-scale, formal organizations.

#### SOC 525 (3) Social Movements

Survey of major sociological perspectives on social movements, including theoretical approaches and empirical research on the causes, processes, and outcomes of social movements.

#### SOC 530 (3) Sociology of Capitalism

Overview of the political economy of the United States as an advanced capitalist society with a focus on economic and political inequality, the class structure, the labor process, race and gender relations, the welfare state, the global dimensions of capitalism, and modern crisis tendencies.

#### SOC 541 (3) Social Deviance

Sociological perspectives on social deviance; overview of theoretical approaches; emphasis on symbolic interactionism; issues of social control; research examples and policy implications.

#### SOC 542 (3) Criminology

A critical consideration of myths concerning crime, perspectives on crime and their assumptions, current criminology theory, and construction of alternative explanations related to crime.

#### SOC 546 (3) Race, Culture & Ethnicity

Study of minority racial and cultural groups in US society. An examination of how the lives of the members of these groups are affected by racism, prejudice, and discrimination.

#### SOC 558 (3) Sociological Theory

An overview of sociological theory that surveys the classical tradition and emphasizes contemporary theories including functionalism, conflict theory, rational choice theory, and symbolic interactionism, as well as recent trends in theoretical developments.

#### SOC 560 (3) Environmental Sociology

Examines the sociological relationship between people and the environment including: ways various societies view the environment, social changes from ecological degradation, and solutions to environmental problems. Topics may include a sociological analysis of climate change, agriculture, and resource extraction.

#### SOC 561 (3) Urban Sociology

A survey of sociological theory and research on the ecology, demography, and social organization of the urban community. Presents a sociological interpretation of the development of urban society and how the process of urbanization affects the basic societal institutions and individual behavior.

#### SOC 563 (3) Social Stratification

An overview of the causes, processes and consequences of social stratification in society. Includes an overview of classical statements about stratification and focuses on social inequalities rooted in social class structures, the organization of political power, and social hierarchies based on race and gender differences in society.

#### SOC 565 (3) Law & Chemical Dependency

Addresses aspects of criminal and civil law pertinent to substance abuse.

#### SOC 566 (3) Program Planning

Theoretical and practical aspects of the planning process within social service systems. Examines the social context of planning and the use of a sociological knowledge base for planning in human services.

#### SOC 569 (3) Survey Research

Techniques of survey research, interview, and questionnaire construction, field administration, and sampling methodology.

#### SOC 570 (3) Sociology of Parent-Child Interaction

Examines parent-child relationships in societal context; socialization theories; classic and contemporary research; parenting applications.

**SOC 579 (3) Sociological Ethnography**

Examination of ethnographic methodologies in sociology with emphasis on analytic, performance, and autoethnography. Exploration of ethics in ethnography, visual sociology, and first-hand experience in both crafting and presenting ethnographic works. Pre: SOC 101 or SOC 101W; SOC 201 or similar social science research course with instructor permission.

**SOC 580 (3) Qualitative Methods**

Examination of ethnographic methodologies in sociology with emphasis on analytic, performance, and autoethnography. Exploration of ethics in ethnography, visual sociology, and first-hand experience in both crafting and presenting ethnographic works. Pre: SOC 101 or SOC 101W; SOC 201 or similar social science research course with instructor permission.

**SOC 582 (3) Social Change**

Analysis of social forces and processes involved in changing norms, values, and structures in traditional and modern societies. Examines both planned and unplanned change.

**SOC 583 (3) The Family and Society**

An examination of theory development and research findings about family systems with a special emphasis on societal influences (social, economic, political) on the changing family.

**SOC 584 (3) Sociology of Religion**

Analysis of the structures, functions, and origins of religion, its relationship to other social institutions, and its role in modern secular society. Examines processes of individual religiosity and explores current religious movements and trends.

**SOC 585 (2-6) Selected Topics**

Topics vary as announced in class schedule. May be retaken for credit if topic varies.

**SOC 590 (1-3) Workshop**

Workshop topics vary as announced in class schedule. May be retaken for credit.

**SOC 591 (1-6) In-Service****SOC 601 (3) Topics in Sociology**

Topics vary as announced in class schedule. May be repeated for credit if topic varies.

**SOC 602 (3) Seminar: Social Organization**

Macro-analysis of society as a system. Examines cultural, structural, behavioral, and ecological patterns of organization. Includes a focus on complex organizations.

**SOC 603 (3) Seminar: Social Psychology**

A survey and analysis of major scientific approaches to human social behavior.

**SOC 604 (3) Seminar: Social Statistics**

Appreciation of basic multivariable methods in the analysis of sociological data. Includes computer applications using SPSS and application to various social issues.

**SOC 605 (3) Seminar: Social Research**

Advanced-level introduction or review of social science research methods, including entire research process: problem definition, literature review, hypothesis development, method development, data collection, analysis, interpretation, and communication; focuses on quantitative methods.

**SOC 606 (3) Seminar in Sociological Theory**

An overview of sociological theory that spans the classical and contemporary traditions within the discipline and focuses on current theoretical issues and controversies within the field.

**SOC 607 (3) Program Evaluation**

Quantitative and naturalistic paradigms as a knowledge base for program evaluation. Examines the social context and implication of evaluation to discuss mode and ethical considerations. Includes applied contribution of empirical research and current issues and trends.

**SOC 609 (3) Seminar: Thesis Writing**

Exploration of intellectual craftsmanship, existing models of thesis scholarship, the

generic elements of the thesis, the writing process, and common obstacles to thesis completion in a collaborative and supportive context designed to foster significant progress on the thesis project throughout the semester.

**SOC 677 (1-3) Individual Study**

A maximum of six credits is applicable toward a degree program.

**SOC 691 (1-4) In-Service**

Topics vary as arranged by students and instructor. May be retaken for credit.

**SOC 694 (1-2) Alternate Plan Paper**

Preparation of an alternate plan paper under supervision of the student's graduate advisor. Prerequisite: must be enrolled in the MS program in Sociology.

**SOC 695 (1-6) Internship: Human Services**

Prerequisite: consent

**SOC 696 (1-6) Internship: College Teaching**

The internship in college teaching is designed to provide opportunity to acquire supervised teaching experience in the college classroom and to explore a career in college teaching. It also serves as a vehicle for the student to become more aware of personal strengths and identify areas in which further growth is needed.

Prerequisite: consent

**SOC 697 (1-12) Internship: Sociology**

The internship is designed to provide opportunity to apply classroom learning, to practice and enhance skills, to experience professional socialization, and to explore a career. It also serves as a vehicle for the student to become more aware of personal strengths and identify areas in which further growth is needed.

Prerequisite: consent

**SOC 699 (1-3) Thesis****CORRECTIONS****CORR 517 (3) Program Administration**

Implications of sociological knowledge for the administration of human services programs. Theoretical and practical aspects of administration with the social service systems.

**CORR 541 (3) Social Deviance**

Sociological perspective on social deviance; overview of theoretical approaches; emphasis on symbolic interactionism; issues of social control; research examples and policy implications.

**CORR 542 (3) Criminology**

A critical consideration of myths concerning crime, perspectives on crime and their assumptions, current criminology theory, and construction of alternative explanations related to crime.

**CORR 543 (3) Penology**

Addresses the justifications for punishment, the historical development of punishment, the legal and policy issues concerning capital punishment, and the use of incarceration as a response to crime.

**CORR 544 (3) Women in the Criminal Justice System**

This course focuses on the experiences of women in the criminal justice system-as victims, offenders, and professionals. Women's involvement in this system (whether they were a defendant, an attorney, an inmate, a correctional officer of a crime victim) has often been overlooked or devalued. The goal of this course is to bring the special needs and contributions of women in the criminal justice system into sharper focus.

**CORR 547 (3) Community Corrections**

Philosophy, historical developments, and theoretical basis of probation, parole, and other community corrections programs. Evaluation of traditional and innovative programs in Community Corrections.

**CORR 548 (3) Correctional Law**

Examines the rights of inmates, probationers, and parolees.

**CORR 549 (3) Correctional Counseling**

Principles and methods of individual and group counseling with juvenile and adult offenders; development of interpersonal helping skills.

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## SOCIOLOGY

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### **CORR 551 (3) Law & Justice in Society**

A critical look at the construction of the concepts of law and justice as it operates in the United States and an application of the principles of justice to community issues.

### **CORR 552 (3) Victimology**

Historical overview of characteristics of victims, victim-offender relationships, societal victimization, victim's rights and services, and restorative justice.

### **CORR 553 (3) Treatment Methods in Corrections**

Examination of major correctional treatment models, e.g., individual and group counseling approaches, behavior modifications, reality therapy, and transactional analysis. Considerations in planning, implementation, and evaluating juvenile and adult treatment programs. Critical evaluation of research on the effectiveness of various treatment methods.

### **CORR 559 (3) Issues in Corrections**

A critical examination of current issues in the correctional field.

### **CORR 565 (3) Law & Chemical Dependency**

Addresses aspects of criminal and civil law pertinent to substance abuse.  
Prerequisite: HLTH 225 or PSYC 73

### **CORR 585 (2-6) Selected Topics**

Topics vary as announced in class schedule. May be retaken for credit if topic varies.

### **CORR 591 (1-6) In-Service**

Topics vary as arranged by students and instructor. May be retaken for credit.

### **CORR 607 (3) Program Evaluation**

Quantitative and naturalistic paradigms as a knowledge base for program evaluation. Examines the social context and implication of evaluation to discuss mode and ethical considerations. Includes applied contribution of empirical research and current issues and trends.

### **CORR 647 (3) Correctional Theory & Practice**

Critical analysis of the relationship between causal theory and correctional practice.

### **CORR 677 (1-3) Individual Study**

### **CORR 694 (1-2) Alternate Plan Paper**

Preparation of an alternate plan paper under supervision of the student's graduate advisor. Prerequisite: must be enrolled in the MS program in Sociology: Corrections.

### **CORR 698 (1-6) Internship**

The graduate-level internship in Corrections is designed to provide opportunity to apply classroom learning, practice and enhance research and administrative skills, and experience professional socialization.

### **CORR 699 (1-3) Thesis**

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## SPANISH MS

### **SPANISH EDUCATION MS**

(DISCIPLINE-BASED)

*College of Arts and Humanities  
Department of Modern Languages  
227 Armstrong Hall • 507-389-2116*

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Graduate study in Spanish at Minnesota State University offers students two program options: Master of Science in Spanish (Community College Option) and Master of Science Spanish Education (Discipline based). The MS Spanish is for broad training in Spanish and is suited for students who plan to teach at the post-secondary level or pursue additional graduate study. The degree also serves students who are pursuing an advanced degree in Spanish for work in the professions. The MS Spanish Education option is primarily for licensed K-12 teachers of Spanish who are interested in pursuing an advanced degree in their field.

The Department of Modern Languages also cooperates with the College of Education by offering supporting coursework (secondary and FLES methods of teaching a world language and/or studies in Spanish) toward the Masters in Arts of Teaching degree for World Languages: Spanish. For information about the MAT or courses that lead to K-12 licensure, contact the College of Education.

**Admission.** Complete the general admission requirements of the College of Graduate Studies and Research. Applicants must possess Spanish oral proficiency at a level of advanced low on the ACTFL proficiency scale or equivalent (contact department for information). A writing sample in Spanish, personal statement in English summarizing experiences and professional goals that apply to the MS degree in Spanish, and two letters of recommendation, one from an undergraduate instructor or academic advisor should be sent to the department chair.

**Graduate Teaching Assistantships.** A number of graduate teaching assistantships are available during the academic year. A graduate teaching assistant in the Department of Modern Languages teaches classes in elementary French, German, Spanish or ESL and receives a salary, a tuition stipend and automatic residency for tuition purposes. For more information, contact the College of Graduate Studies and Research or the Department of Modern Languages.

**Graduate Study Abroad.** Graduate credit can be earned in Spanish on department-sponsored Study Abroad Programs. For more information, consult the Department of Modern Languages.

## SPANISH MS

### **COMMUNITY COLLEGE OPTION**

(Thesis Plan - 30 credits)  
(Alternate Plan Paper -34 credits)

This program prepares students of Spanish for teaching in higher education. Students interested in teaching at the college level should see their advisor about identifying appropriate methods courses and professional education courses to strengthen their teaching performance. Licensure is not required to teach at the college level, but courses in teaching skills are highly recommended. Fifty percent of the credits must be taken at the 600 level (excluding thesis and APP credits).

### **Required Major Teaching Field (18-22 credits)**

Choose any 500/600 level Spanish courses selected in consultation with an advisor.

### **Required Modern Language Methods (3 credits)**

MODL 560 Methods of Teaching Modern Languages (3)

### **Required Professional Education credits (6 credits)**

Choose any 500/600 level Professional Education courses selected in consultation with an advisor.

### **Electives (0-4 credits)**

Choose any 500/600 level elective courses selected in consultation with an advisor.

### **Required Thesis or Alternate Plan Paper**

SPAN 694 Alternate Plan Paper (1-2)  
SPAN 699 Thesis (3-4)

## SPANISH EDUCATION MS

### **(Discipline-Based)**

(Thesis Plan - 30 credits)  
(Alternate Plan Paper -34 credits)

This program is primarily for teachers of Spanish who are interested in pursuing an advanced degree in the language and in increasing their proficiency. The degree requires courses totaling 30 credits (with thesis) or 34 credits (with alternate plan paper). Fifty percent (50%) of the credits must be taken at the 600 level, excluding thesis or APP credits.

This degree does not lead to teaching licensure. Students who desire initial licensure should consult the Master of Arts in Teaching (MAT) program.

### **Required Spanish (18-22 credits)**

Choose any 500/600 level Spanish courses selected in consultation with an advisor.

**Required Professional Education (6 credits)**

Choose any 500/600 level Professional Education courses selected in consultation with an advisor.

**Electives (0-6 credits)**

Choose any 500/600 level elective courses selected in consultation with an advisor.

**Required Thesis or Alternate Plan Paper (1-4 credits)**

SPAN 694 Alternate Plan Paper (1-2)

SPAN 699 Thesis (3-4)

## COURSE DESCRIPTIONS

## SPANISH

**SPAN 501 (1-4) Topics in Linguistics**

Topics may vary. Course may be repeated for credit. Discussion and analysis of Spanish linguistics (syntax, sociolinguistics, historical linguistics, translation theory and practice, etc.)

Prerequisite: graduate status, undergraduate major or equivalent in Spanish

**SPAN 502 (1-4) Topics in Spanish Peninsular Literature**

Topics vary: Don Quixote de la Mancha; Golden Age drama and poetry; Spanish literature since the Golden Age, etc. May be repeated for credit.

Prerequisite: graduate status, undergraduate major or equivalent in Spanish

**SPAN 503 (1-4) Topics in Spanish American Literature**

Topics vary. Major writers from Spanish America. Topics include Spanish American novel, Spanish American poetry, Spanish American drama, Spanish American short story, romanticism, and the Mexican novel, etc. May be repeated for credit.

Prerequisite: graduate status, undergraduate major or equivalent in Spanish

**SPAN 564 (1-6) Internship: FLES**

Field experience in the elementary school setting for students earning licensure in Spanish or Elementary Education Teaching Specialty in Spanish.

**SPAN 593 (1-6) Individual Study Abroad: Topics in Language and Linguistics**

Topics will vary. May be repeated for credit. Study for credit must be approved by the department prior to departure.

Prerequisite: graduate status, undergraduate major or equivalent in Spanish

**SPAN 594 (1-6) Individual Study Abroad: Topics in Spanish American Literature**

Topics will vary: major writers from Spanish America; Spanish American novel; Spanish American poetry; Spanish American drama; Spanish American short story, romanticism, the Mexican novel. May be repeated for credit. Study for credit must be approved by the department prior to departure.

Prerequisite: graduate status, undergraduate major or equivalent in Spanish

**SPAN 595 (1-6) Individual Study Abroad: Topics in Spanish Peninsular Literature**

Topics will vary. Spanish literature from medieval to modern times. May be repeated for credit.

Prerequisite: graduate status, undergraduate major or equivalent in Spanish

**SPAN 596 (1-6) Individual Study Abroad: Topics in Spanish American Culture**

Topics will vary. Major cultural and historical aspects of Latin America from pre-colonial times to the present. May be repeated for credit.

Prerequisite: graduate status, undergraduate major or equivalent in Spanish

**SPAN 597 (1-6) Individual Study Abroad: Topics in Spanish Peninsular Culture**

Topics will vary. May be repeated for credit.

**SPAN 600 (2) Research & Bibliography**

An introduction to methods of literary research, including use of literary resources, literary theory, the MLA style, and paper writing strategies. Primarily for graduate students who are writing their thesis or alternate plan paper.

Prerequisite: graduate status

**SPAN 601 (1-4) Topic Spanish Language/Linguistics**

Topics will vary. May be repeated for credit.

Prerequisite: graduate status

**SPAN 602 (1-4) Topic Peninsular Culture**

Topics will vary. May be repeated for credit.

Prerequisite: graduate student status

**SPAN 603 (1-4) Topics in Spanish American Culture**

Topics will vary. May be repeated for credit.

Prerequisite: graduate status

**SPAN 604 (1-4) Topic: Peninsular Spanish Literature**

Topics will vary. May be repeated for credit.

Prerequisite: graduate status

**SPAN 605 (1-4) Topics in Spanish American Literature**

Topics will vary. May be repeated for credit.

Prerequisite: graduate status

**SPAN 677 (1-4) Individual Study**

Individual study, variable topics.

Prerequisite: graduate status

**SPAN 692 (1-3) Independent Study**

Variable topics.

Prerequisite: graduate status

**SPAN 694 (1-2) Alternate Plan Paper****SPAN 697 (1-6) Internship: Community College Option**

Preparation of teaching materials and minimum of 20 hours of classroom teaching at the intermediate level. Areas in which materials are to be developed and taught are listening comprehension, speaking, literature, culture, and writing.

Prerequisite: permission of instructor

**SPAN 699 (3-6) Thesis**MODERN LANGUAGE (MODL)**MODL 560 (3) Methods of Teaching Modern Languages**

This course is intended to provide prospective secondary school teachers and teachers of modern languages with experience and background to prepare them for teaching modern languages to secondary school students. The course meets state licensure requirements. Major topics include: Second language acquisition and child language development; comprehension-based teaching strategies; standards-based curriculum development and planning; integrating modern languages with the secondary school curriculum; subject content instruction; and teaching and assessing listening, speaking, reading and writing skills. Pre: Student must demonstrate oral proficiency level of Intermediate-High on ACTFL scale or equivalent in target language. Contact the department for additional details

**MODL 561 (1) Applied Modern Language Teaching Methods**

A field experience in a secondary school setting for students earning licensure in modern language teaching. Practicum students work with middle or high school students of French, German, or Spanish. Take concurrently with or following MODL 460.

**MODL 562 (3) Foreign Languages in the Elementary School (FLES) Methods**

Introduction to theory and practice of modern language teaching for children grades K-6, including oral language development, second language literacy development, content-based language instruction, and techniques for language immersion programs. This course meets state licensure requirements.

Pre: Student must demonstrate oral proficiency level of Intermediate-Mid on ACTFL scale or the equivalent in target language. Contact the department for additional details.

**MODL 563 (1) Applied FLES Methods**

A field experience in an elementary setting for students earning licensure in modern language teaching. Practicum students work with elementary school students in French, German, or Spanish. Take concurrently with or following MODL 462.

**MODL 565 (1-3) Workshop in Modern Language Education**

Topics in modern language education. May be repeated for credit.

## SPECIAL EDUCATION

### SPECIAL EDUCATION

College of Education  
Department of Special Education  
313 Armstrong Hall • 507-389-1122

The Department of Special Education at Minnesota State University, Mankato offers graduate programs in the areas of Learning Disabilities (LD) and Emotional and Behavioral Disorders (EBD) that are designed to prepare professionals to work with students with disabilities in school settings. These two programs lead to special education licensure and a Masters Degree in Special Education.

All our courses are held at both our Edina site at 7700 France Ave or on campus. Many courses are hybrid online/in-person classes.

#### LICENSURE OR GRADUATE CERTIFICATE PROGRAMS

Graduate certificate programs leading to licensure in either LD or EBD are offered for participants who hold a current or previous teaching license and wish to add a special education license to their credential.

##### Admission Requirements

- 2.5 GPA in the last two years of course work
- Bachelors Degree from an accredited university or college
- Completed Graduate Studies Application
- Official College Transcripts

##### Post-Baccalaureate Initial Teacher Licensure Program

The Post-Baccalaureate initial teacher licensure program is designed for students with a BS or BA degree outside of education. These students must apply to the Minnesota State University, Mankato College of Education Professional Education Program during their first semester in the program by submitting the following:

- Application to Professional Education
- Unofficial copies of College Transcripts
- Praxis I test scores
- Writing Assessment (completed within initial licensure courses)

##### Required Courses

SPECIAL EDUCATION EB/D & LD: Graduate Certificate (LICENSURE)

##### Prerequisites Course for Special Education (7 credits)

SPED 548 Behavior Management (4)  
SPED 605 Intro to Psychology and Education of Exceptional Children and Youth (3)

##### Special Education Core Courses Required for EB/D & LD Certificate/Licensure (17 credits)

SPED 619 Education of Students with Mild Disabilities (4)  
SPED 639 Transition Planning for St w/ Mild Disabilities (3)  
SPED 645 Formal and Informal Clinical Procedures (3)  
SPED 646\* Instructional Interventions (4)  
SPED 661\* Special Education Law (3)

\* No courses substitutions will be allowed for SPED 646 and 661.

##### Courses Required for E/BD Certificate/Licensure (10 credits)

SPED 657 Behavior Disorders Diagnosis and Remediation (4)  
SPED 658 Seminar: Current Issues and Trends EBD (3)  
SPED 667 Graduate Student Teaching: EBD (3)

##### Courses Required for LD Certificate/Licensure (6 credits)

SPED 649 Seminar: Current Issues and Trends LD  
SPED 648 Graduate Student Teaching: LD

##### Courses Required for Post- Baccalaureate Initial Teacher Licensure (16 credits)

SPED 509 Learning and Human Development for Diverse Learners (4)  
SPED 514 Literacy Methods in an Inclusive Classroom (4)  
SPED 511 Strategies for an Inclusive Classroom (4)  
SPED 513 Professional Growth and Development (4)

##### Student Teaching

A separate full time, 16 week student teaching experience is required for each licensure area and for all students regardless of prior teaching experience or cur-

rent employment status. On-the-job placements are considered on a case-by-case basis. Application for student teaching is due early in the semester PRIOR to the student teaching semester. Deadlines and forms are posted on the Minnesota State University, Mankato College of Education website. Students enroll in the student teaching course for one concentration area at a time.

##### Seminar

Students must be concurrently registered for the seminar for the same concentration as their student teaching experience. Seminar classes meet weekly and constitute a separate, graded course from the student teaching experience.  
SPED 658 Seminar: Current Issues & Trends EBD (3) OR  
SPED 649 Seminar: Current Issues and Trends LD (3)

#### MASTER OF SCIENCE DEGREE PROGRAM

The Master of Science Degree allow students to pursue advanced study in special education. Credits earned as part of the licensure program may be applied to the MS degree. Students meeting the admission requirements may apply directly to the Masters of Science Degree program. Students accepted into the Grade Certification/Licensure Program may apply to the MS program after completion of 12 credits of special education core coursework.

##### MS Admission Requirements

- Minimum GPA of 3.2
- Bachelors Degree from an accredited university or college
- Completed Graduate Studies Application
- Official College Transcripts

##### Additional Expectations

- All work for a graduate degree must be completed within a six-year period.
- Students must complete all licensure course work including the student teaching requirements prior to enrollment in the Research Core Courses.
- Successful completion of the Research Core Courses is required for enrollment in the Capstone Project (SPED 694).
- All Masters Degree candidates must successfully complete the research requirements and the Capstone Project.

#### SPECIAL EDUCATION MS

##### Special Education Core Courses (27 credits)

SPED 514 Literacy Methods for an Inclusive Classroom: Diverse Learners (4)  
OR  
SPED 511 Differentiation & Accommodation in an Inclusive Classroom: Diverse Learners (4)  
SPED 619 Education of Students with Mild Disabilities (4)  
SPED 639 Transition Planning for Students with Mild Disabilities (3)  
SPED 645 Formal and Informal Clinical Procedures (3)  
SPED 646\* Instructional Interventions (4)  
SPED 661\* Special Education Law (3)  
SPED 658 OR  
649 Seminar: Current Issues and Trends (3)  
SPED 667 OR  
648 Graduate Student Teaching (3)

\* No courses substitutions will be allowed for SPED 646 and 661.

##### Research Core Courses (7 credits)

Students must pass both Research Core Courses with a grade of C or higher to be allowed to register for the Capstone Project Course. The Research Core Courses must be taken in sequence.  
SPED 600 Introduction to Educational Research (3) OR  
SPED 603 Action Research (3)  
SPED 610 Using Educational Research (3)  
SPED 694 Preparing the Capstone (1)

##### Capstone Project (1 credit)

Completion of the Capstone Project may require multiple semesters to complete for a maximum of 3 semesters. Students must be registered for at least 1 SPED 694 credit for each semester.

#### COURSE DESCRIPTIONS

##### SPED 507 (3) The Special Education Learner in the Regular Classroom

This course prepares special education teachers to instruct learners with exceptional needs in a classroom environment shared with regular class students. It supports a team approach to instructional delivery, using assistive technology, accommodations and modifications, adapted curriculum and collaborative staffing.

**SPED 508 (4) Individuals with Diverse and Exceptional Needs**

This course is designed to provide an introduction and overview of the characteristics and educational needs of children and youth with diverse and exceptional needs in the public school. The course introduces Minnesota Graduation Standards Rules in relationship to the needs of students with diverse and exceptional needs.

**SPED 509 (4) Learning and Human Development for Diverse Learners**

This course is designed to introduce students to theories of learning and human development as they relate to regular and diverse learning populations. Students will acquire an understanding of the many factors that affect learning and human development and strategies that can be used to enhance learning for all learning populations.

**SPED 510 (4) Assessment, Evaluation and Individualized Planning for Diverse Learners**

This course will provide students with assessment skills and information. Emphasis will be placed on learning and administering a variety of norm-referenced and criterion reference test instruments and applying them appropriately.

**SPED 511 (4) Differentiation & Accommodation in an Inclusive Classroom: Diverse Learners**

This course is designed to describe and demonstrate strategies that teachers can use to differentiate the curriculum to meet the special learning needs of students in an inclusive classroom setting. This course will also examine the latest knowledge related to intelligence, creativity, holistic education, and classroom differentiation.

**SPED 512 (4) Due Process, Planning & Design of the Individual Education Program**

This course will provide students with knowledge and skills related to IEP's, alternative dispute process for the state of Minnesota, and legal issues and requirements.

**SPED 513 (4) Professional Growth and Development for Teachers of Diverse Learners**

This course will introduce students to methods and strategies for personal and professional growth and development. Students will engage in reflective inquiry, identify professional dispositions, and describe environment effects on learning and human development.

**SPED 514 (4) Literacy Methods for an Inclusive Classroom: Diverse Learners**

This course is designed to provide an introduction to reading and language arts instruction for special needs and other students in an inclusive classroom. As a result of taking this course, students will be able to plan and implement effective literacy lessons and utilize a variety of differentiation strategies.

**SPED 515 (3) Introduction to Talent Development**

Introduction to the field of gifted education and talent development. Focus on History, Definitions, Practices, Characteristics, Needs, Special Populations, and Models.

**SPED 520 (3) Education of Young Children with Exceptional Needs**

Legal, historical, and foundational issues in the education of young children with disabilities as well as characteristics, service needs, and models of service for young children with disabilities with emphasis on young children with moderate/severe disabilities.

**SPED 530 (3) Teaching Individuals with Physical and Multiple Disabilities****SPED 548 (4) Behavior Management and Learning Environments for Diverse Learners**

Applied practical approaches to improve academic and personal social behavior of special needs students in general education and special education settings. Principles of applied behavior analysis including reduction and enhancement procedures will be explored.

**SPED 590 (1-3) Workshop in Special Education****SPED 591 (1-2) In-Service: Special Education****SPED 600 (3) Introduction to Educational Research**

Introduction to quantitative, qualitative, and action research methodologies as applied to educational research and evaluation. Development of skills for interpreting and evaluating published studies, for evaluating programs, and for developing original or secondary research plans using one or a combination of the three methodologies.

**SPED 601 (3) Quantitative Research Methods**

Focus in quantitative methods in educational research in applied educational settings.

**SPED 602 (3) Qualitative Research Methods**

Focus on qualitative methods in educational research in applied educational settings.

**SPED 603 (3) Action Research in Education**

This course will familiarize teachers with methods used in action research. Action research is a systematic observation of one's own teaching situation, environment, or pedagogical practice with the expectation that a new understanding will result in a plan of action that in turn, will ultimately lead to change.

**SPED 605 (3) Intro to the Psychology and Education of Exceptional Children and Youth**

Current practices in the identification, placement, and education of exceptional children and youth. Emphasis on patterns of social, cognitive, language, and psychological development of exceptional children. Social, political, and economic advocacy issues.

**SPED 606 (3) Creativity and Intelligence**

Conceptions, foundations, theories, and practical applications of creativity and intelligence.

**SPED 610 (3) Using Educational Research**

This writing intensive course is designed to develop skills for the evaluation and critical consumption of education research for a variety of purposes. Prerequisite: SPED 600,603 or other comprehensive introduction to research course.

**SPED 611 (3) Professional and Scholarly Writing and Planning in Education**

Teaches objective academic writing and the basics of program and curriculum planning design.

**SPED 614(3) Literacy Instruction for an Inclusive Classroom**

This course covers strategies used to meet the literacy learning needs of all students within an inclusive classroom. Strategies will focus primarily on the special learning needs of students with EBD, LD and gifted learners.

**SPED 619 (4) Education of Students with Mild Disabilities**

History, theory, definitions, philosophies, programming models and service delivery trends for students with learning disabilities and/or emotional/behavioral disorders. Students will be exposed to specific techniques for teaching students with disabilities in inclusive settings.

**SPED 621 (3) Assessment of Young Children with Exceptional Needs****SPED 622 (3) Working with Parents and Infants with Exceptional Needs****SPED 623 (3) Working with Young Children with Cognitive Delays****SPED 624 (2) Working with Young Children with Social/Emotional Delays****SPED 625 (2) Curr/Methods Working w/Young Children w/Development Needs Group Settings****SPED 626 (2) Organization and Administration of Special Education: Early Childhood****SPED 627 (1-8) Graduate Student Teaching: Early Childhood Special Education****SPED 630 (3) Emotional Intelligence and Learning**

Teaching for wisdom, emotional IQ, and intrapersonal intelligence, as they relate to human potential, self-actualization, and learning.

**SPED 635 (3) Social and Emotional Needs of Gifted, Talented, and Creative Individuals**

Theory and practice for promoting healthy development of talented individuals.

**SPED 638 (3) Curriculum & Instruction for Classroom Talent Development**

Focus on high-end teaching and learning strategies from which all students can benefit. Emphasis on gifted education pedagogy in the general classroom.

**SPED 639 (3) Transition Planning for Students with Mild Disabilities**

In-depth examination of the problems, trends, and procedures used in planning career development, pre-vocational, and vocational programs for the mildly disabled. Program models, assessment, job analysis, placement, and employer-school relations are covered.

**SPED 640 (2) Administration and Supervision of Special Education**

Procedures in establishing and improving educational programs for exceptional children.

Prerequisite: SPED 4/548

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## SPECIAL EDUCATION

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### SPED 641 (3) Advanced Differentiation of Curriculum and Instruction for Talent Development

Focus on development of differentiated curricular and instructional strategies, and programming options to promote optimal individual student growth and talent development. Multiple talent areas explored on a continuum of services.

### SPED 642 (3) Programs, Systems, and Models in Gifted Education

In-depth examination of gifted education and talent development programs, their implementation, applications, benefits and weaknesses. Focus on standards of the field.

### SPED 645 (3) Formal/Informal Clinical Procedures

Interpretation and implementation of psychological reports, formative and summative assessment data, enabling incorporation of relevant information/data into an evaluation report. Applied practical understanding, development, usage, and interpretation of information assessment tools determining identification and instructional design.

### SPED 646 (4) Instructional Interventions

Pedagogy for teaching students with learning disabilities with an understanding of instructional theories and trends. Applications include sequences/adaptations of instruction/curriculum, technology integration, collaborative techniques, and meta-cognitive strategies. Focus is in reading, written language, and mathematics.

### SPED 647 (3) Instructional Intervention Strategies for an Inclusive Classroom

This course is designed to teach advanced learning strategies that are appropriate for special needs learners in a general education classroom. This classroom will demonstrate how to differentiate the curriculum in an inclusive classroom setting.

### SPED 648 (3) Graduate Student Teaching: Learning Disabilities

Field experiences in off-campus programs providing services to students with learning disabilities. Designed to professionalize the educational experience and ensure license standards competency. Must be taken with SPED 649. Prerequisite: All course work related to special ed licensure must be completed. Professor permission required.

### SPED 649 (3) Seminar: Current Issues and Trends-Learning Disabilities

Summative conversations incorporating current issues and trends in the area of learning disabilities. Must be taken with SPED 648. Prerequisite: All course work related to special ed licensure must be completed. Professor permission required.

### SPED 650 (3) Seminar in Talent Development

Examination of critical issues facing the field of gifted education and talent development while developing proposals for thesis or action research in this area.

### SPED 651 (1-3) Practicum:

Professional experience in a field setting requiring reflection and analysis.

### SPED 657 (4) Emotional/Behavior Disorders: Program Design and Implementation

The purpose of this course is the effective applications of procedures for teaching students with emotional/behavioral disorders in school settings. Students will build individual programs through the use of Functional Behavioral Assessments focusing on Positive Behavioral Supports.

### SPED 658 (3) Seminar: Current Issues and Trends in E/BD

Review of theory, correct best practices, research trends, and issues relative to the delivery of educational services to students with emotional/behavioral disorders. Must be taken with SPED 667. Prerequisite: All course work related to special ed licensure must be completed. Professor permission required.

### SPED 661 (3) Special Education Law

This graduate course is designed to assist educators to develop knowledge of the due process requirements outlined in Minnesota Rule and Statute as well as a working understanding of federal special education law under the Individuals with Disabilities Act (IDEA) and Section 504 of the Rehabilitation Act. Understanding the requirement of due process and federal special education law is critical in today's schools, both for teachers as well as administrators.

### SPED 662 (3) Spirituality and Human Development in Education

Examines both sacred and secular views of spirituality and explores the nature of reality. Also examined are self-actualization, spiritual journey, human development, and education.

### SPED 667 (3) Graduate Student Teaching: E/BD

Field experiences in off-campus programs providing services to students with learning disabilities. Designed to professionalize the educational experience and ensure license standards competency. Must be taken with SPED 658. Prerequisite: All course work related to special ed licensure must be completed. Professor permission required.

### SPED 677 (1-3) Individual Study

### SPED 680 (3) Characteristics and Assessment of Children with Autism

This class will take an in-depth look at the characteristics of children with autism as well as the historical treatment of these children. This class will look at current assessment methods used to develop education programs, and will also explore issues related to advocacy.

### SPED 681 (3) Teaching Children with Autism: Planning & Intervention for Students with Autism

This course will focus primarily on educational program development for children with autism. Students will learn to build visual schedules and write social stories to affect the behavior of students with autism. Students will learn the importance of individualized program development and legal issues surrounding appropriate programming.

### SPED 682 (1-3) Methods for Students with Asperger's Syndrome

The purpose of this course is to provide parents, teachers, and caregivers of individuals with Asperger's Syndrome with background, knowledge, and experience with the diagnosis and characteristics, assessments, functional analysis, various methods and practices, transition planning, support for families, and issues faced by adults with Asperger's Syndrome.

### SPED 691 (1-3) In-Service

### SPED 694 (1) Preparing the Capstone Project

Designed to assist student in preparation of their capstone project as part of their graduation requirements. In this experience, students receive one-on-one contact with their advisor.

### SPED 699 (1-6) Thesis

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## THEATRE ARTS MA

## THEATRE ARTS MFA

*College of Arts and Humanities  
Department of Theatre and Dance  
201 Performing Arts Center • 507-389-2118  
[www.mnsu.edu/theatre/](http://www.mnsu.edu/theatre/)*

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Theater and Dance offers graduate programs leading to the Master of Fine Arts and Master of Arts. With its emphasis on professional preparation in acting, directing, design or technical production, graduate studies in Theatre at Minnesota State University provides many opportunities for students seeking to enrich and broaden their backgrounds and interests.

The Department of Theatre and Dance is production-oriented and offers six mainstage productions during the academic year, four studio shows, two touring theatres, along with a four-play summer season and two laboratory theatres. Approximately 12 graduate assistantships are available each year.

### THEATRE ARTS MFA

(Thesis Plan - 60 credits)

The Master of Fine Arts in Theatre represents a minimum of 60 credits beyond the bachelor's degree. The MFA is a terminal degree for the creative artist in theatre and provides training for increased professional competencies in the specialized areas of Theatre Arts. The basis for granting the degree is artistic as well as academic competence. Specific study plans are to be arranged in concurrence with the student's major advisor.

A unique feature of the Minnesota State University Master of Fine Arts in Theatre Arts degree program is the professional internship requirement. Each student is required to complete an internship in the student's major specialty with a theatrical company approved by the Department of Theatre and Dance.

**Admission.** In addition to meeting the general admission requirements of the College of Graduate Studies and Research, the Master of Fine Arts in Theatre Arts degree has special entrance requirements. A student must have:

1. a 3.0 GPA (based on 4.0) for the last two years of undergraduate work
  2. a major in Theatre Arts or its equivalent
  3. three letters of recommendation
  4. resume of theatre work
  5. acting and directing applicants must submit
-

- a. prompt book samples of plays directed by applicant
  - b. photographs and tape recordings of plays directed or acted in by applicant
  - c. appropriate reviews or criticisms of acting or directing by applicant
6. design/technical production applicants must submit
- a. renderings
  - b. working drawings and/or patterns
  - c. photographs/slides of completed work

**Required Performance Core (34 credits)**

THEA 514	Stage Dialects I (2)
THEA 515	Stage Dialects II (2)
THEA 526	Stage Combat (2)
THEA 581	Theatre History I (3)
THEA 582	Theatre History II (3)
THEA 60X	Project Practicum (6)
THEA 612	Advanced Theatre Speech II (2)
THEA 613	Adv. Theatre Speech II (2)
THEA 680	Theatre Research (3)
THEA 681	Theatre Theory and Criticism (3)
THEA 699	Thesis (3)

Choose one of the following performance tracks:

**Acting Track****Required Acting**

THEA 510	Musical Theatre Act I (3)
THEA 516	Acting Scene Studies (3)
THEA 518	Acting Styles (3)
THEA 519	Acting For Radio/TV (3)
THEA 583	Musical Theatre History or THEA 585 Theatre Dramaturgy
THEA 617	Advanced Acting Techniques (3)
THEA 621/622	Advanced Theatre Movement (6)
THEA 697	Internship (5)

**Directing Track**

THEA 530	Theatre Management (3)
THEA 535	Advanced Directing Methods (3)
THEA xxx	Acting Elective (3)
THEA 585	Theatre Dramaturgy
THEA 630	Design for Directors (8)
THEA 635	Advanced Directing Methods II (3)
THEA 697	Internship (6)

**Musical Theatre****Required Musical Theatre**

THEA xxx	Acting Electives (6)
THEA 510	Musical Theatre Acting I (3)
THEA 511	Musical Theatre Acting II (3)
THEA 583	Musical Theatre History
THEA 621/622	Advanced Theatre Movement (8)
THEA xxx	Private Voice (0)
THEA 697	Internship (6)

**Required Design Core (51 credits)**

Choose three of the following four:

THEA 540	Scene Design I (3)
THEA 560	Costume Design I (3)
THEA 570	Lighting Design I (3)
THEA 575	Sound Design I (3)

and the following courses

THEA 530	Theatre Management
THEA 581	Theatre History I (3)
THEA 582	Theatre History II (3)
THEA 585	Theatre Dramaturgy (3)
THEA 670	Advanced Design Laboratory (3)
THEA 675	Portfolio Seminar (1)
THEA 680	Theatre Research (3)
THEA 681	Theatre Theory and Criticism (3)
THEA 60x	Project Practicum (6)
THEA xxx	Electives (9)
THEA 697	Internship (5)
THEA 699	Thesis (3)

Choose one of the following design tracks:

**Scenic Design Track****Required Scenic Design (9 credits)**

THEA 541	Scene Design II (3)
THEA 545	Scene Painting (3)
THEA 677	Independent Study (Drafting) (3)

**Costume Design Track****Required Costume Design (9 credits)**

THEA 561	Costume Design II (3)
THEA 564	Costume History (3)
THEA 677	Independent Study (Advanced Makeup) (3)

**Lighting Design Track****Required Lighting Design (9 credits)**

THEA 551	Drafting for the Theatre (3)
THEA 571	Lighting Design II (3)
THEA 6XX	Elective (3)

**Technical Direction Track****Required Technical Direction (9 credits)**

THEA 551	Drafting for the Theatre (3)
THEA 555	Technical Direction (3)
THEA 6xx	Theatre Elective (3)

**Sound Design Track****Required Sound Design (9 credits)**

THEA 551	Drafting for the Theatre (3)
THEA 556	Sound Design II (3)
THEA 6xx	Elective (3)

**Additional Requirements**

Master of Fine Arts students must fulfill a residence requirement of two years (4 semesters) and have a minimum of 26 credits at the 600 level; must pass a written comprehensive examination during the final semester of residency; complete four projects representing different styles of theatre productions. No P/N grades are acceptable in fulfilling major requirements. An internship performing professional theatre activities and a written thesis documenting artistic work must be complete in order to qualify for the degree.

**THEATRE ARTS MA**

(Thesis Plan - 30 credits)

Programs are available for students who have an undergraduate major or minor in theatre or its equivalent. Thirty credits of graduate level work is required to complete the Master of Arts degree. A minimum of 17 credits must be at the 600 level. In addition to Theatre Research, specific plans of study are to be devised with the concurrence of the student's advisor. No P/N grades are acceptable in fulfilling major requirements.

Students planning programs concentrating on theatre are advised to consult with the Department of Theatre and Dance chairperson.

**COURSE DESCRIPTIONS****TTHEA 510 (3) Musical Theatre Acting I**

A performance-based class concentrating on using the song as the basis for acting.

**THEA 511 (3) Musical Theatre Acting II**

Introductory survey of American Musical Theatre history and repertoire as well as performance techniques for the singing actor.

ALT-F Prerequisite: CON

**THEA 512 (2) Theatre Speech I**

Study and exercises in vocal development emphasizing the demands of stage speech.

S Prerequisite: CON

**THEA 513 (2) Theatre Speech II**

Theatre speech including study of the International Phonetic Alphabet.

F Prerequisite: CON

**THEA 514 (2) Stage Dialects I**

A study and practice of dialects most often used in performance.

ALT-S Prerequisite: CON

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## THEATRE ARTS

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### THEA 515 (2) Stage Dialects II

A continuation of Stage Dialects I.  
ALT-F Prerequisite: CON

### THEA 516 (3) Acting Scene Studies

Advanced scene studies with a focus on analysis and the varied approaches to developing motivations.  
ALT-S Prerequisite: CON

### THEA 517 (3) Acting Techniques

The development of individual performance craft and advanced acting methodologies.  
ALT-F Prerequisite: CON

### THEA 518 (3) Acting Styles

Advanced scene studies in classical and stylized dramatic literature.  
ALT-S Prerequisite: CON

### THEA 519 (3) Acting for Radio/TV

Development of performance craft for the media.  
ALT-S Prerequisite: CON

### THEA 525 (1-2) Styles of Motion

Specialized training in a variety of physical techniques.  
ALT-S Prerequisite: CON

### THEA 526 (2) Stage Combat

An exploration of basic skills involved in unarmed combat and a variety of historical weapons systems with primary emphasis on theatricality and safety.  
F Prerequisite: CON

### THEA 530 (3) Theatre Management

Exposes students to the functions of theatre managers through case studies, discussions, practical application and readings.  
ALT-S Prerequisite: CON

### THEA 535 (3) Advanced Directing Methods

Advanced studies in script analysis, actor psychology, and staging techniques culminating in performance projects with critical analysis.  
S Prerequisite: CON

### THEA 540 (3) Scene Design I

Development of techniques and skills in the creation of scenery.  
F Prerequisite: CON

### THEA 541 (3) Scene Design II

Refinement of model building and drawing skills in theatrical design.  
S Prerequisite: THEA 540

### THEA 544 (3) Styles and Ornamentation

A visual appreciation of assorted cultures through the study of their architecture, decoration, furniture, utensils, etc.

### THEA 545 (3) Scene Painting II

Provides information on materials and techniques of scenic painting with a large amount of lab time for experimentation with technique.  
ALT-F Prerequisite: CON

### THEA 551 (3) Drafting for the Theatre

Enhances the advanced theatre student's ability to show complex elements of a theatrical design in a clear manner using accepted theatrical drafting methods.  
ALT-F Prerequisite: CON

### THEA 555 (3) Technical Direction

Explores duties and construction techniques of the theatre technical director including budgeting, stage machinery, theatrical systems, and project management.  
ALT-F Prerequisite: CON

### THEA 560 (3) Costume Design I

Theory and techniques in costume design and execution.  
F Prerequisite: CON

### THEA 561 (3) Costume Design II

Advanced costume design theory and techniques.  
ALT-S Prerequisite: THEA 560

### THEA 564 (3) Costume History

Survey of costume history from ancient Egypt to 1900.  
ALT-S

### THEA 565 (3) Advanced Make-Up

Practical application of advanced makeup techniques.  
ALT-S Prerequisite: CON

### THEA 570 (3) Lighting Design I

The study of lighting equipment, usage, techniques, and stage lighting design.  
S Prerequisite: CON

### THEA 571 (3) Lighting Design II

Solving particular lighting design challenges.  
ALT-F Prerequisite: THEA 570

### THEA 575 (3) Sound Design I

Production and sound effects, electronic sound reinforcement of live performance, choice and operation of sound equipment, as well as basic music styles and terminology.  
S Prerequisite: CON

### THEA 576 (3) Sound Design II

Integrated sound design to support and enhance theatrical production.

### THEA 581 (3) Theatre History I

Survey of theatrical history from its origins to 1700.  
ALT-S

### THEA 582 (3) Theatre History II

Survey of theatrical history from 1700 to the present.  
ALT-S

### THEA 583 (3) Musical Theatre History

Survey of the history of the American musical theatre from its origins to the present.

### THEA 585 (3) Theatre Dramaturgy

This class teaches how to access historical information and present it to directors, actors or designers in a way that will help them make informed and practical artistic choices.

### THEA 600 (1-4) Summer Stock

Technical work or acting in summer theatre productions.  
Summer Prerequisite: CON

### THEA 601 (1-2) Practicum: Directing

A considerable production responsibility which utilizes skills in script analysis, actor coaching, design coordination, and general production management.  
F,S Prerequisite: CON

### THEA 602 (1-2) Practicum: Acting

A considerable production responsibility dealing with the preparation and performance of a major acting role including a character study, a rehearsal diary, research materials on the author, play and character analysis, and post-production evaluation of the project.  
F,S Prerequisite: CON

### THEA 603 (1-2) Practicum: Theatre Management

Special assignments in stage management, house and/or concessions management, public relations, recruitment, and related areas.  
F,S Prerequisite: CON

### THEA 604 (1-2) Practicum: Scene Design

Preparation and execution of a major scene design assignment. Requires a design and construction schedule, preliminary and final design concepts, necessary drafting details, and a final evaluation of the finished project.  
F,S Prerequisite: CON

**THEA 605 (1-2) Practicum: Tech Theatre**

A considerable production responsibility dealing with some technical aspect including technical drawings, budget management, and construction techniques.  
F,S Prerequisite: CON

**THEA 606 (1-2) Practicum: Costume Design**

Full and assistant costume design assignments for production offered to aid in development of techniques and creativity.  
F,S Prerequisite: CON

**THEA 607 (1-2) Practicum: Costume Construction**

The construction of costumes for theatre productions, used to increase student's skills in advanced costume construction.  
F,S Prerequisite: CON

**THEA 608 (1-2) Practicum: Lighting Design**

Preparation and execution of a major lighting design assignment with appropriate schedules, supervision of hanging, focusing, and cues, with a final evaluation of the finished product.  
F,S Prerequisite: CON

**THEA 609 (1-2) Practicum: Sound Design**

Preparation and execution of a major sound design assignment including all sound effects, reinforcement, and amplification.  
F,S Prerequisite: CON

**THEA 612 (2) Advanced Theatre Speech I**

Advanced study and exercises in vocal development.  
S Prerequisite: CON

**THEA 613 (2) Advanced Theatre Speech II**

Advanced theatre speech including study of the International Phonetic Alphabet.  
F Prerequisite: CON

**THEA 615 (1-4) Touring Theatre Supervision**

Supervision or directing of theatre tour.  
Prerequisite: CON

**THEA 617 (3) Advanced Acting Techniques**

Advanced study and development of individual performance, craft, and acting methodologies.  
F Prerequisite: CON

**THEA 621 (1) Advanced Theatre Movement I**

Individual exploration of ballet, jazz, modern, or tap dance based upon the student's expertise.  
F Prerequisite: CON

**THEA 622 (1) Advanced Theatre Movement II**

Continuation of Advanced Theatre Movement I.  
S Prerequisite: CON

**THEA 630 (2) Design for Directors**

Theory and Practice of basic design principles geared for the theatrical director. The course may be repeated to include set, costume, lighting, and sound design.  
F, S Prerequisite: CON

**THEA 635 (3) Advanced Directing Methods II**

Continuation of Advanced Directing Methods I.  
S Prerequisite: CON

**THEA 670 (3) Advanced Design Laboratory**

Advanced study and practical application techniques in either scene, costume, or lighting design.  
F, S Prerequisite: CON

**THEA 675 (1) Portfolio Seminar**

Exploring the techniques of building a working design/technical portfolio and resume.  
F Prerequisite: CON

**THEA 677 (1-4) Individual Study**

Advanced independent study.  
F,S Prerequisite: CON

**THEA 680 (3) Theatre Research**

Techniques in advanced theatre research and appropriate project and thesis.  
F Prerequisite: CON

**THEA 681 (3) Theatre Theory and Criticism**

Survey of drama and theatre critics from Aristotle to the present.  
S Prerequisite: CON

**THEA 697 (1-6) Internship****THEA 699 (1-3) Thesis****URBAN AND REGIONAL STUDIES MA****URBAN PLANNING MA****CERTIFICATES:****LOCAL GOVERNMENT MANAGEMENT****URBAN PLANNING**

*College of Social and Behavioral Sciences*

*Urban and Regional Studies Institute*

106 Morris Hall • 507-389-1714

The Urban and Regional Studies Institute offers multidisciplinary professional degree programs oriented toward examining and understanding the broad range of problems and opportunities associated with the nation's urban and regional areas. Since its beginning in 1966, the Institute has been training students who have chosen to become involved in the processes of solving problems in a variety of urban environments. As one of the first such graduate multidisciplinary urban studies degree program in the nation, the Institute has developed a generalist, problem solving philosophy for professionals in local government management and planning careers.

Students are offered flexibility in establishing their individual program. In addition to formal coursework, students are encouraged to undertake independent study, become involved in community service projects, participate in field studies and accept internships in local agencies. For complete details concerning the academic program, the graduate student should contact the Urban and Regional Studies Institute.

The Institute has received the Stephen B. Sweeney Award from the International City/County Management Association as the program that had made the most significant contribution to the training of men and women for local government leadership careers. There are master's degree programs of study available through the Institute, including the Master of Arts in Urban and Regional Studies and the Master of Arts in Urban Planning.

There are also two graduate certificates (Local Government Management and Urban Planning) offered which are designed to meet the basic standards of competency in the profession.

The fields of urban management and planning are rapidly expanding and require a professional education. Applicants who hold the master's degree receive a preference in hiring. The U.S. Department of Commerce has projected a continual increase in opportunities and higher salaries in the coming decade. On the job, managers and planners enjoy a great deal of professional mobility. They frequently provide leadership in complex assignments; they are in constant contact with the general public and with co-workers. They gain satisfaction in solving important problems.

**Admission.** In addition to meeting the general admission requirements of College of Graduate Studies and Research, admission to the program as a degree-seeking student requires: 1) Undergraduate course in research methods/statistics, or equivalent; 2) Undergraduate GPA of at least 3.0/4.0 in last two years of coursework; 3) Two recommendations assessing potential for successful graduate study; 4) Personal statement describing applicant's interests and experience. Admission to the program on a provisional basis may be approved for applicants with a GPA of at least 2.6 in the last two years of coursework and who demonstrate special

## URBAN AND REGIONAL STUDIES

circumstances and potential. Absence of specific undergraduate coursework in urban studies or statistics will result in the assigning of deficiency coursework which must be completed before graduation.

**Financial Assistance.** Applicants seeking university sources of financial assistance should apply to the Office of Financial Aid. See Sources of Financial Assistance at the front of the Bulletin. Special awards are also available to qualified Institute students for research and teaching assistantships, fellowships, and cooperative work/graduate study positions. These awards are administered by the Institute based upon criteria established by alumni donors, local/state/federal agency grants, and faculty and professional association gifts. Although applications to the Institute for financial assistance will be accepted anytime, most complete consideration will be afforded to those complete applications received before April 1 for consideration of awards for the following academic year. Financial assistance awards are normally made for one academic year. Students in good standing may apply for professional internship appointments during the second year of graduate study.

### URBAN AND REGIONAL STUDIES MA

(Thesis Plan - 33 credits)

(Alternate Paper Plan - 36 credits)

The Master of Arts is a multidisciplinary degree program oriented toward examining and understanding the broad range of problems and opportunities associated with the nation's urban and regional areas. Students in the MA degree program may prepare themselves for professional careers in local government, or use the MA degree as preparation for Ph.D. study. The program requirements are designed to provide flexibility while ensuring a multidisciplinary, problem-solving perspective.

#### Required Core (9 credits)

URBS 501 Foundations in Urban Management and Planning (3)

URBS 502 Urban Analysis (3)\*

URBS 667 Studio (capstone) (3)

\* a previous course in statistics is expected

#### Graduate Focus (12 credits)

Students will develop a 12-credit concentration in consultation with the advisor.

#### Elective Concentration (12 credits)

Student chooses 12 elective credits from URSI and other departments, with consent of advisor.

#### Free Elective (3 credits)

The department recommends URBS 697.

### URBAN PLANNING MA

(Alternate Plan Paper Option Only - 36 credits)

The Master of Arts in Urban Planning is a 2 year professional program oriented towards a systematic, creative approach to analyzing and planning neighborhoods, small towns, cities, suburbs, metropolitan areas, regions, and states. While most planners work for government at the state and local level, planners work in the non-profit and private consulting areas as well.

#### Required Core (9 credits)

URBS 501 Foundations in Urban Management & Planning (3)

URBS 502 Urban Analysis\*(3)

URBS 667 Studio (capstone) (3)

\* a previous course in statistics is expected

#### Graduate Focus (12 credits)

URBS 602 Planning Process (3)

URBS 604 Zoning (3)

URBS 661 Long Range Planning (3)

URBS 662 Operational Planning (3)

#### Elective Concentration (12 credits)

Student chooses 12 elective credits from URSI and other departments, with consent of adviser.

#### Free Electives (3 credits)

The Department recommends URBS 697 Internship. GEO 673, GIS for Planners, is expected for students with no previous GIS training.

### Graduate Certificate in Local Government Management (12 credits)

This is a graduate certificate program which provides the basic concepts, skills, and values for pursuing a career in local government management. The program is designed to meet the basic standards of professional competency specified by the International City/County Management Association (ICMA). The program is appropriate for students who wish to develop a local government management focus within a graduate degree program, or for students who have already earned their degrees and wish to prepare for a career shift.

URBS 512 Public Information and Involvement (3)

URBS 603 Organization Environment (3)

URBS 650 Administrative Services (3)

URBS 651 Urban Finance System (3)

### Graduate Certificate in Urban Planning (12 credits)

This is a graduate certificate program which provides the basic concepts, skills, and values for pursuing a career in local government planning. The program is designed to meet the basic standards of professional competency specified by the American Institute of Certified Planners (AICP). The program is appropriate for students who wish to develop a local government planning focus within a graduate degree program, or for students who have already earned their degrees and wish to prepare for a career shift.

URBS 602 Planning Process (3)

URBS 604 Zoning & Legal Issues (3)

URBS 661 Long Range & Strategic Planning (3)

URBS 662 Operational Planning (3)

## COURSE DESCRIPTIONS

### URBS 501 (3) Foundations in Urban Management & Planning

This course is a survey of the local community - the forces which shape it, the significance of a democratic public, and the professional practice of local government service.

### URBS 502 (3) Urban Analysis

This course is designed to develop the skills needed to gather, analyze, and present information for resolving applied problems in local government and community settings. Pre: a previous course in statistics

### URBS 511 (3) Urban Policy Analysis

Prepares students to analyze problems, identify alternative solutions, and utilize techniques of analysis.

### URBS 512 (3) Public Information and Involvement

This course is designed for students preparing for a professional career in local government or public service, focuses on media relations and building citizen involvement through public awareness projects.

### URBS 513 (3) Urban Program Evaluation

Reviews processes and techniques related to evaluation of public programs.

### URBS 515 (3) Urban Housing Policy

Public policy and programs and non-profit initiatives that address issues of housing supply, quality, and costs.

### URBS 517 (3) Urban Law

An overview of local government law and local governing powers. In addition, public issues in the legal context will be examined from a management and planning perspective.

### URBS 531 (3) Urban Design Principles

Basic working knowledge and vocabulary of urban design concepts and techniques in an applied problem-solving context.

### URBS 533 (3) Urban Development

Theory and applications of principles of landscape architecture or urban design.

### URBS 535 (3) Downtown Revitalization

Examines the problem of central business district deterioration and explores the changing patterns of economic and social mobility with primary focus upon the trends of downtown revitalization currently being employed by the public and private sectors.

**URBS 537 (3) Urban Heritage Preservation**

Preservation techniques, principles of structural evaluation, adaptive use potentials and options, economic consideration in preservation, and the role of legislation.

**URBS 551 (3) Nonprofit Sector**

Nature of the Third Sector, from a variety of perspectives, and implications for managing both internal and external relations of nonprofit organizations.

**URBS 553 (3) Grants Administration**

Raising resources for public and nonprofit organizations from needs assessment through obtaining funding to managing the grant after it is awarded.

**URBS 555 (3) Regional & County Development**

Regional and county planning content and procedures, including basic research, land use planning, and implementation of regulations.

**URBS 557 (3) Economic Development**

A survey course covering the concepts, processes, tools, and strategies of economic development in local communities. Emphasis is on the "why" and "how" of economic development.

**URBS 561 (3) Environmental Planning**

Examines and applies the fundamental concepts, techniques and mechanisms for environmental planning at the city, county, and sub-state regional levels.

**URBS 571 (3) Urban Transportation**

Examines transportation problems of, and solutions for, large and medium sized cities. Special emphasis on reducing traffic congestion, improving management of transit systems, and linking transportation and land-use planning.

**URBS 580 (1-3) Colloquium**

Presentations of research and major trends in urban professions.  
Prerequisite: permission of instructor

**URBS 581 (1-3) Selected Topics:**

Varying topics dealing with emerging trends and contemporary needs of students resulting from professional changes.

**URBS 583 (1-6) Workshop**

Varying topics dealing with emerging trends and contemporary needs of students resulting from professional changes.

**URBS 585 (1-6) Community-Based Problem Solving**

Problem solving in communities and direct involvement into specific areas of study of student interest.  
Prerequisite: permission of instructor

**URBS 601 (3) Urban Management Process**

Survey course which examines the professions and processes of urban management, including community leadership, organizing, and delivering community services.

**URBS 602 (3) Planning Process**

Survey of the history, concepts, values, and ethics of public-sector planning. Emphasis on practical and comprehensive approach to developing and implementing plans.

**URBS 603 (3) Organization Environment**

Changing nature of management of urban and human behavior in the municipal organization. Emphasis on the development of decision-making and communication skills.

**URBS 604 (3) Zoning & Legal Issues**

Zoning theory, concepts, and techniques, with emphasis on administration of zoning in a planning office.

**URBS 615 (3) Urban Professional Seminar**

Reading and research class with emphasis on student projects, analysis of contemporary urban problems, and major skills and concepts of urban professions.  
Prerequisite: URBS 601 or 602 or permission of instructor

**URBS 650 (3) Urban Administrative Services**

Provides an overview of urban administrative services with an emphasis on urban finance systems and human resource management. Examines the economic and human resource environment for local government managers' decision-making.

**URBS 651 (3) Urban Finance Systems**

Course examines financial management utilizing accurate forecasting, fund accounting and fiscal reporting. Covers budget cycle including legal limitations on local taxation, expenditures, and debt financing.

**URBS 653 (3) Urban Mgmt Seminar**

Discussion, research, presentation, and critique of standard and emerging concepts of urban management.

**URBS 661 (3) Long Range & Strategic Planning**

Comprehensive planning process in urban areas, including basic studies, capital improvement programming, and exercises.

**URBS 662 (3) Operational Planning**

Current planning, including zoning, subdivision regulations, annexations, and special projects.

**URBS 665 (3) Advanced Planning Seminar**

Discussion, research, presentation, and critique of standard and emerging concepts of urban and regional planning.  
Prerequisite: URBS 661 or 604

**URBS 667 (3) Urban Studies Studio**

An advanced learning experience working in small group settings on applied projects and problem solving. The team project produced in the studio meets graduate student's capstone project requirement.  
Prerequisite: 18 graduate credits, or permission of instructor

**URBS 689 (1-4) Individual Study**

Individual learning experiences arranged with faculty on a learning contract basis.  
Prerequisite: permission of instructor

**URBS 694 (1-2) Alternate Plan Paper**

Prerequisite: permission of instructor

**URBS 697 (1-6) Internship**

Scheduled work assignments varying in length and content under the supervision of selected professional sponsors.  
Prerequisite: permission of instructor

**URBS 699 (1-3) Thesis**

The collection and dissemination of original research in compliance with accepted research standards.  
Prerequisite: permission of instructor