Division Structure and Course Descriptions

This is the Division Structure (majors) and Course Descriptions sections of the 1999-2001 University of Minnesota, Morris Catalog.
Division Structure

Disciplines (i.e., departments or fields such as English, physics, or psychology) are grouped administratively into four divisions—Education, Humanities, Science and Mathematics, and Social Sciences—to help integrate the various areas of study into a liberal arts curriculum, provide a forum for faculty discussion of common programs and interests, and encourage the planning of interdisciplinary academic programs.

Courses are listed alphabetically by discipline. Each discipline description includes, as appropriate, requirements for the major, the minor, and teacher education licensure.

Division of Education

Education (page 77)
Elementary Education (page 77)
Secondary Education (page 80)
Wellness and Sport Science (page 132)

Through the field of education, students can pursue the study of education and its role in society (separate from teacher licensure programs); complete a major and teaching licensure in elementary education; prepare to teach one or more liberal arts subjects at the secondary school level; and/or prepare for graduate study in education.

Intercollegiate athletics, lifetime physical activity skill courses, and courses addressing various wellness issues are offered by the wellness and sport science faculty. A human performance lab is available for wellness and athletic performance assessments for students, faculty, and staff. Coaching endorsement is also offered for interested individuals.

Many students enrolled at UMM, no matter what their area of study, participate in intercollegiate athletic competition, which is directed by the wellness and sport science faculty.

Division of Education programs are enhanced through faculty commitment to personalized instruction, use of current instruction technologies, and opportunities for student and faculty participation in multicultural and international educational experiences.

Division of the Humanities

Art History (page 64)
Art, Studio (page 66)
English (page 82)
French (page 87)

German (page 91)
Humanities (page 95)
Music (page 110)
Philosophy (page 113)
Russian (page 123)
Spanish (page 126)
Speech Communication (page 128)
Theatre Arts (page 130)

The Division of the Humanities is composed of 10 disciplines offering a major, as well as supplementary courses in Russian and the humanities, i.e., the literature and thought of the non-English-speaking world in translation.

Since the time of the ancient Greeks and Romans, the disciplines in the humanities have been central to the meaning of a liberal education. These disciplines investigate important questions about the nature of human beings and their cultures, and examine alternative views concerning the meaning and direction of life.

In addition to its curricular programs, the Division of the Humanities sponsors and directs a varied program of cocurricular activities, organizations, and events for the campus and surrounding communities, including

- Student art exhibitions and traveling Art Gallery exhibits of works by professional artists.
- Scheduled poetry readings; a Prairie Gate Press; foreign and American films; a Writing Room to help students develop creative and expository writing skills; lectures on literary and language subjects; French, German, and Spanish student clubs with a variety of projects; opportunities for language students to travel and study abroad.
- A varied program of musical events, including concert band, jazz ensemble, and choir concerts, as well as recitals by students and faculty; opportunities to work with well-known composers and artists in residence; tours.
- A Philosophy Colloquium in which internationally distinguished philosophers participate.
- A number of opportunities in speech communication, including sponsorship of speakers and discussion groups, student attendance at conferences, and participation in the student organization Communications Club.
- Annual offering of faculty- and student-directed plays; opportunities to work with professional troupes in residence; annual theatre tour to New York or London.
The Division of the Humanities provides students with opportunities to participate in the varied curricular and cocurricular programs described above. Through participation in these programs as either employees or volunteers, scores of students each year discover for themselves the meaning and value of a liberal education.

Finally, the Division of the Humanities offers its students one of UMM’s most beautiful and useful facilities, the Humanities Fine Arts Center—a building that has been granted by Progressive Architecture its First Design Award with the following citation:

“It gives architectural form to a powerful new direction in education—the school being integrated into the community. This project shows how the school can be a model for community development.”

**Division of Science and Mathematics**

- Biology (page 68)
- Chemistry (page 70)
- Computer Science (page 73)
- Geology (page 89)
- Mathematics (page 106)
- Natural Science (page 113)
- Physics (page 115)

Whether interested in biology, chemistry, computer science, geology, mathematical sciences, or physics, students will find that programs in UMM’s Division of Science and Mathematics offer excellent preparation for employment in a related field, graduate study, or teaching in junior or senior high school. Courses leading to Minnesota secondary education licensure are offered in physical science, life science, earth science, and mathematics. The sciences form an integral part of UMM’s preprofessional programs in the health, medical, and engineering fields and contribute to general education studies.

Students will have many opportunities to get to know their instructors and perhaps be associated with them on research projects. Students have worked with faculty on computational geometry, distributive computing projects, and the theory of light scattering in superfluid helium. They have helped develop a variety of methods for the analysis of statistical data, such as a loglinear model of educational data and the representation of three-dimensional copulas in terms of two-dimensional marginals. Students have also developed computer software for mathematics education and have researched topics in biomathematics and theoretical mathematics. They have conducted investigations into molecular biology and the genetic engineering of microorganisms, the ecology of prairies, and the genetics and ecology of amphibians. They have studied the geology of glacial deposits in Minnesota, analyzed the fossils and sediments of the Cretaceous Seaway in South Dakota, and contributed to faculty field research in the Rocky Mountains of Colorado and Idaho. They have conducted research on the breakdown of pesticides, the preparation of novel chemical compounds, and the development of new chemical reactions both at UMM and in universities and national laboratories across the country. Students are encouraged to publish results of their research with faculty or to present their findings at conferences or seminars. Most students at some time serve as teaching assistants, earning money while assisting professors in tasks ranging from helping with lab courses to tutoring beginning students.

Field trips are an integral part of the learning process. Students and faculty have traveled to the Florida Keys, the volcanoes of Hawaii, the deserts of Arizona and New Mexico, western Canada and Alaska, and throughout Minnesota and surrounding regions of the Upper Midwest, in seeking a better understanding of our Earth’s natural environments, landforms, and processes.

Students will find other ways to enhance their studies in the sciences. The Geology, Math, ACM Computer, Biology, ACS, Chemistry, and Physics Clubs provide an opportunity for students and faculty who share mutual interests to meet informally and participate in related activities. In addition, visiting scientists frequently come to campus to discuss current scientific problems and topics with UMM faculty and students.

Construction is underway for major additions to the Science and Mathematics facilities. A new laboratory and classroom wing, to be completed in the year 2000, will house biology and chemistry labs, a computer classroom, and general purpose classrooms. Current facilities will subsequently be renovated to house the computer science, geology, mathematics, and physics programs. With these enhanced facilities, the opportunities available to students will be even more exciting.
Division of the Social Sciences

Anthropology (page 63)
Economics (page 74)
Geography (page 88)
History (page 93)
Liberal Arts for the Human Services (page 99)
Management (page 104)
Political Science (page 117)
Psychology (page 120)
Social Science Major (page 123)
Sociology (page 124)

The social sciences consist of the branches of study dealing with the structure of society and the activities of its members. The Division of the Social Sciences includes the disciplines of anthropology, economics, geography, history, management, political science, psychology, and sociology. In addition, its courses are incorporated into the interdisciplinary programs in Latin American Area Studies, Women's Studies, and European Area Studies, and it offers a major in Liberal Arts for the Human Services and a social science major for teacher licensure. The social sciences coursework is oriented toward liberal education studies that prepare students to understand human beings in their social relationships.

Many of the social science disciplines encourage various kinds of fieldwork. Students intern on the local as well as state and federal levels as social workers, counselors, state legislative assistants, and administrative assistants in a variety of programs and organizations, including the Older Adults Program, welfare agencies, and group homes. A number of students have co-authored studies with faculty and have presented papers at professional conferences. Many students serve as research and teaching assistants. They have used primary research materials to recreate historical events for reports filed in the archives of the West Central Minnesota Historical Research Center. They go beyond the boundaries of the strictly “classroom” education to explore and gain firsthand experience with the professional tools of their field.

UMM's Division of the Social Sciences has many resources that lend themselves well to establishing individual learning experiences. Among these are the West Central Minnesota Historical Research Center, Psychology Laboratory, Project on Fantasy, Model United Nations Program, and a wide variety of internship and field studies programs.

Close student-faculty rapport is an important aspect of social sciences study. Individualized attention is emphasized and students are encouraged to work on a one-to-one basis with professors to create a program that best suits their needs and interests.

Interdisciplinary Programs

European Studies (page 84)
Interdisciplinary Studies (page 96)
Latin American Area Studies (page 97)
Women's Studies (page 134)

UMM offers interdisciplinary majors, whose educational objectives are realized through an integration of courses from two or more disciplines, in European Studies, Latin American Area Studies, and Liberal Arts for the Human Services, as well as a minor in Women's Studies. Interdisciplinary course offerings not associated with an interdisciplinary major or minor involve in-depth material of two or more traditional academic disciplines or divisions, and some include subject material of a very broad nature that cannot properly be regarded as a part of a traditional discipline or division.

Course Numbers and Designators

Course numbers reflect the level of difficulty of a course. Generally, courses numbered 1xxx are for undergraduates in their first year of study, courses numbered 2xxx are for undergraduates in their second year of study, courses numbered 3xxx are for undergraduates in their third year of study, and 4xxx are for undergraduates in their fourth year of study. Some courses require prerequisite coursework or advanced class status for entrance while others do not. Students should plan their programs carefully to complete courses in the proper sequence.

The current Class Schedule contains information on course prerequisites, hours and days, and room assignments.

In connection with course numbers, disciplines and programs are identified by a two-, three-, or four-letter designator prefix (e.g., Ed for Education, Pol for Political Science, LAAS for Latin American Area Studies).
Anthropology (Anth)

This discipline is in the Division of the Social Sciences.

Objectives—Anthropology courses are designed to provide an understanding of human beings and human society with respect to both biology and culture. Students are exposed to a broad historical and comparative framework within which to view the variety of human cultures. Coursework deals with concepts, techniques, and substantive knowledge of the branches of the field, e.g., physical anthropology, social and cultural anthropology, ethnology, archaeology, and linguistics. (See Sociology for more information.)

Course Descriptions

Note: Anth 2300, 2451, 3300, and 3411 may also be taken for credit in Sociology.

Anth 1101f. Introductory Physical Anthropology.
(Sci-L; 4 cr)

Anth 1111f,s. Introductory Cultural Anthropology.
(SS; 4 cr)
Varieties and range of human behavior as revealed through the comparative study of cultures throughout the world. Concepts developed by anthropologists to explain both the unity and diversity of humankind.

Anth 2300f,s. Variable Topics in Latin American Cultures and Societies.
(IP; 4 cr; repeatable when topic changes; QP–1110 or Soc 1100; SP–1111 or Soc 1101)
Same as Soc 2300. Use of archaeological, historical, and contemporary materials. Topics may include political institutions, media, popular culture, ethnicity, class, ecology, and cultures.

Anth 2301f. Social Change and Development in Latin America.
(IP; 4 cr; QP–1110 or Soc 1100; SP–1111 or Soc 1101)

Anth 2302s. Women in Latin America.
(IP; 4 cr; QP–1110 or Soc 1100; SP–1111 or Soc 1101)

Anth 2400s. Variable Topics in American Indian Cultures and Societies.
(See specific topics for general education categories; 4 cr; repeatable when topic changes; QP–1110 or Soc 1100; SP–1111 or Soc 1101; not offered 1999-2000)
In-depth study of topic concerning North American Indians. Topics vary, e.g., traditional Native American societies and cultures, Native American archaeology, Native American religions.
Art History (ArtH)

This discipline is in the Division of Humanities. Art history involves the study of ways the visual arts reflect and shape the world’s cultures.

Objectives—The purposes of the art history curriculum are to develop students’ understanding of some of the historical traditions in the visual arts, to teach students methods of analysis and interpretation of the meaning of works of art, and to help students learn to evaluate the quality of works of art.

Major Requirements

ArtS 1101-1102—Basic Studio Drawing
ArtS 1103—Basic Studio 2-D Design
ArtS 1104—Basic Studio 3-D Design
ArtS 1105-1106—Basic Studio Discussion
ArtH 1101—Principles of Art
ArtH 1111—Ancient and Medieval Art
ArtH 1121—Renaissance to Modern Art and 24 additional credits in art history

Courses with grades of D may not be used to meet the major requirements. Required courses may not be taken S-N unless offered S-N only.

Minor Requirements

ArtH 1101—Principles of Art
ArtH 1111—Ancient and Medieval Art
ArtH 1121—Renaissance to Modern Art and 12 additional credits in art history

Courses with grades of D may not be used to meet the minor requirements. Required courses may not be taken S-N unless offered S-N only.

Course Descriptions

ArtH 1101. Principles of Art. (FA; 4 cr)

An introduction to the theories, methods, and vocabulary of art history. Involves development of basic skills of research and of analysis and interpretation of individual works of art. Helps the student to understand the intrinsic as well as the historical-cultural meanings of works of art.

ArtH 1111. Ancient and Medieval Art. (FA; 4 cr)

Origins of art in the Paleolithic period; survey of monuments of ancient Mesopotamia, Egypt, Greece, and Rome as well as the Early Christian, Romanesque, and Gothic styles of western Europe. Also treatment of non-western traditions in ancient and medieval periods.

ArtH 1121. Renaissance to Modern Art. (FA; 4 cr)

Survey of the major works of art of western Europe from 1400 to the present.

ArtH 3101f. Art of Ancient Greece. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or jr; not offered 1999-2000)

Beginning with the Bronze Age civilization of the Aegean, Minoan, Cycladic, and Mycenaean, this course will follow the development of painting, sculpture, and architecture of ancient Greece, concentrating on the classical period in Athens and the Hellenistic period in the Mediterranean.
ArtH 3111s. Art of Ancient Rome. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or jr; not offered 1999-2000)

The Etruscan civilization in central Italy originating in the 7th century B.C.E. will initiate the study of the development of Roman painting, sculpture, and architecture with concentration on the Imperial period of ancient Rome to the 4th century C.E.

ArtH 3121f. Medieval Italian Art. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or jr; not offered 1999-2000)

Painting, sculpture, and architecture of central Italy, notably Tuscany, from the 12th to 14th centuries, with attention to the influence of the mendicant monastic orders of the Franciscans and the Dominicans on the art of the period.

ArtH 3131f. Northern Renaissance Art. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or jr; not offered 2000-2001)

The renewal of interest in Classical art and humanistic learning as embodied in the painting, sculpture, and architecture of Italy. Tuscany in central Italy will be the focus of this rebirth in Renaissance art and culture.

ArtH 3141f. 15th-Century Italian Renaissance Art. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or jr; not offered 2000-2001)

The art of the 15th and early 16th centuries in Italy, concentrating on the work of Leonardo da Vinci, Michelangelo, and Raphael to understand the classicizing principles of the time and place.

ArtH 3151s. High Renaissance Art. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or jr; not offered 2000-2001)

An art history seminar. See ArtH 4000 for topics.

ArtH 3161f. Mannerist Art. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or jr; not offered 2000-2001)

A survey of the art of the period of invention to the present. Major artists and movements are examined in the context of a variety of aesthetic, social, and technical issues.

ArtH 3171. Baroque Art. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or jr; not offered 2000-2001)

The art of the Roman Catholic Counter Reformation, the court of Louis XIV of France, and “the Little Dutch Masters” and Rembrandt in 17th-century Europe.

ArtH 3181. 18th-Century European Art. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or jr; not offered 1999-2000)

The art of the court of Louis XV of France and of the Enlightenment of western Europe and England.

ArtH 3191. 19th-Century European Art. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or jr; not offered 1999-2000)

The art of the nation from 1800 to 1893 during a period of expansion ending in a time of consolidation. Emphasis on landscape painting of the American wilderness and both high style and vernacular architecture provides the basis to understand patterns of immigrant settlement and development of the land.

ArtH 3201f. 19th-Century European Art through Post-Impressionism. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or #; not offered 2000-2001)

A survey of major movements from Neoclassicism through Romanticism, Realism, and Impressionism to Post-Impressionism. Attention is given to iconographical and formal analysis as well as to the social conditions in which artists lived and worked.

ArtH 3211s. Early Modern Art: Symbolism to Surrealism. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or #; not offered 2000-2001)

Survey of the major early modern movements from Symbolism through Cubism, Futurism, Expressionism, Constructivism, De Stijl, and the Bauhaus to Surrealism. Attention is given to theories of modern art as well as to formal and iconographical analyses and to the social conditions in which modern art was created and experienced.

ArtH 3221f. 20th-Century Art: 1945 to the Present. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or #; not offered 1999-2000)

An examination of selected artists and movements from the 1940s through the present. Equal emphasis is given to the art and the social context in which it was made and experienced, and to modernist and postmodernist aesthetic and critical thought.

ArtH 3231s. History of Photography. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or #; not offered 2000-2001)

Survey of European and American photography from the period of invention to the present. Major artists and movements are examined in the context of a variety of aesthetic, social, and technical issues.

ArtH 3241f. African American Art. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or #; not offered 1999-2000)

Survey of African American art from colonial times to the present, focusing on social context and aesthetic and biographical issues.

ArtH 3251s. Pre-Columbian Arts of the Americas. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or jr; not offered 1999-2000)

The pre-colonial arts of the native peoples of Mexico, South America, and the southwestern United States from 1000 B.C.E. to the 16th century C.E.

ArtH 3261s. Chinese Art. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or #; not offered 1999-2000)

Survey of Chinese arts from the Neolithic times to the 20th century, presented in the context of Chinese culture.

ArtH 3271s. The Art of Japan. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or jr; not offered 2000-2001)

A survey of the art of Japan beginning with the introduction of Buddhism in the 6th century followed by a concentration on the Momoyama and Tokugawa periods from the 16th through the 19th centuries, emphasizing the art of printmaking.

ArtH 4000. Variable Topics in Art History. (FA; 2-4 cr; repeatable when topic changes; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or jr)

An art history seminar. See Class Schedule for topics.
**Division Structure and Course Descriptions**

**ArtH 3993f,s, 4993f,s. Directed Study.** (1-5 cr; repeatable; QP–1100 or 1201 or 1202 or jr; #, SP–1101 or 1111 or 1121 or jr; #)

Content and nature of the course to be determined by faculty and student consultation. May include individual research and writing, working in relation to the Art Gallery program, or travel and study.

**ArtH 4994. Senior Honors Project.** (1-5 cr; repeatable; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or jr; prereq participation in Honors Program, #)

A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the seniors honors project is one of the requirements for graduating from UMM “with honors.”

**Art, Studio (ArtS)**

This discipline is in the Division of the Humanities. Studio art includes studies in the traditional areas of the visual arts as well as in contemporary concerns and techniques. Students are introduced to the skills of critical analysis of works of art and to a variety of media and approaches to their use. In addition, the discipline supports cocurricular activities, including the UMM Student Art Club, student exhibitions, and guest speakers.

**Objectives**—The goal of the studio art curriculum is to introduce students to the technical, conceptual, and communication skills necessary for activities in the visual arts and to help students understand the major traditions and the place of the visual arts in our culture. Studio courses serve the needs of students planning to pursue graduate studies in art, students interested in exploring their own creative potential as part of their general education, and students preparing for secondary school teaching.

**Major Requirements**

ArtS 1101-1102—Basic Studio Drawing
ArtS 1103—Basic Studio 2-D Design
ArtS 1104—Basic Studio 3-D Design
ArtS 1105-1106—Basic Studio Discussion
ArtH 1101—Principles of Art
(it is recommended that the above courses be taken during the freshman year)
ArtS 2101—Second-Year Drawing
ArtS 2102—Second-Year Drawing
ArtS 3881—Junior Review
ArtS 4881—Senior Review
ArtS 4901—Senior Exhibit

A minimum of 12 credits in one of the following three major media and a minimum of 6 credits in another of the three major media:

**Painting**

ArtS 2301—Beginning Painting
ArtS 2302—Beginning Painting
ArtS 3300—Advanced Painting

**Sculpture**

ArtS 2401—Beginning Sculpture
ArtS 2402—Beginning Sculpture
ArtS 3400—Advanced Sculpture

a minimum of 6 credits of 2xxx level or above ArtS electives

a minimum of 8 additional credits in ArtS electives

Courses with grades of D may not be used to meet the major requirements. Required courses may not be taken S-N unless offered S-N only.

**Minor Requirements**

ArtS 1101-1102—Basic Studio Drawing
ArtS 1103—Basic Studio 2-D Design
ArtS 1104—Basic Studio 3-D Design
ArtS 1105-1106—Basic Studio Discussion

One 12-credit sequence in one major medium or two 6-credit sequences in two different media:

**Printmaking**

ArtS 2201—Beginning Printmaking
ArtS 2202—Beginning Printmaking
ArtS 3200—Advanced Printmaking

**Painting**

ArtS 2301—Beginning Painting
ArtS 2302—Beginning Painting
ArtS 3300—Advanced Painting

**Sculpture**

ArtS 2401—Beginning Sculpture
ArtS 2402—Beginning Sculpture
ArtS 3400—Advanced Sculpture
ArtS 2101-2102—Second-Year Drawing
or
ArtH 1101—Principles of Art

Participation in ArtS 4901—Senior Exhibit is encouraged but not required

Courses with grades of D may not be used to meet the minor requirements. Required courses may not be taken S-N unless offered S-N only.

**Teacher Preparation Requirements**

Licensure requirements for teaching in grades K-12 include:

the studio art major

a minimum of 3 credits in each of the three major media

ArtS 1050—Beginning Ceramics

the required professional education courses for secondary licensure (see Secondary Education)

ArtE 4103—Methods of Teaching Art K-12

student teaching
Courses with grades of D may not be used to meet the major requirements. Required courses may not be taken S-N unless offered S-N only.

**Course Descriptions**

**ArtS 1050f. Beginning Ceramics.** (ArtP; 3 cr; repeatable to 6 cr)
Personal expression through the medium of clay. Topics will include forming methods using stoneware and porcelain (hand building and wheel techniques), glazing, the nature of clay, glaze chemistry, firing, and kilns.

**ArtS 1070f,s. First-Year Drawing.** (ArtP; 3 cr; repeatable to 6 cr; open to nonmajors; should not be taken by students who have completed Basic Studio [see Second-Year Drawing])
For nonmajors with little or no previous experience in drawing. Exploration of line through contour and gesture, continuing with studies of value, texture, and space. Contemporary and traditional modes of drawing explored using a variety of materials.

**ArtS 1101 through 1106. Basic Studio.** (Appropriate for nonmajors; art majors should also take ArtH 1101)
Preparation for advanced work in studio art; four related parts must be taken concurrently and in sequence. Basic Studio Drawing: basic exercises of drawing, use and exploration of materials and methods in line and form development, problems of spatial representation. Basic Studio 2-D Design: elements of two-dimensional design and color theory, introduction to painting and printmaking. Basic Studio 3-D Design: elements of three-dimensional design, introduction to sculpture. Basic Studio Discussion: theories, philosophy, history of visual arts, contemporary trends in art, selected readings.

**ArtS 1101f-1102s. Basic Studio Drawing.** (ArtP; 2 cr per sem)

**ArtS 1103f. Basic Studio 2-D Design.** (ArtP; 2 cr)

**ArtS 1104s. Basic Studio 3-D Design.** (ArtP; 2 cr)

**ArtS 1105f-1106s. Basic Studio Discussion.** (ArtP; 1 cr per sem)
The four parts of Basic Studio must be taken concurrently.

**ArtS 2050s. Advanced Ceramics.** (ArtP; 3 cr; repeatable to 1200; SP–1050 or # offered when feasible)
For students who have a working knowledge of basic forming and glazing techniques. Emphasis on advanced hand building and wheel techniques, critiques, glaze experiments, and firing.

**ArtS 2101f. Second-Year Drawing.** (ArtP; 3 cr; SP–1400 recommended)
Increases and improves students’ knowledge and skill in drawing as a traditional art form and as a preparation for work in other media.

**ArtS 2102s. Second-Year Drawing.** (ArtP; 3 cr; SP–1400 recommended)
Allows students to use drawing skills previously gained in a more individual way, integrates them with new ideas, and explores experimental drawing directions.

**ArtS 2201f-2202s. Beginning Printmaking.** (ArtP; 3 cr per sem; SP–1400-1600; SP–1101-1106 [10 cr] or # for 2201 for nonmajor js and srs)
Study of and practice in various methods of printmaking: application of drawing skills, color, composition, and personal expression to printmaking techniques.

**ArtS 2301f, 2302s. Beginning Painting.** (ArtP; 3 cr per sem; SP–1600-1605; SP–1101-1106 [10 cr] or # for nonmajor js and srs)
The development of painting as a means of artistic expression including basic technical, material, and formal compositional problems.

**ArtS 2401f-2402s. Beginning Sculpture.** (ArtP; 3 cr per sem; SP–1600-1605; SP–1101-1106 [10 cr] or # for 2401 for nonmajor js and srs)
Exploration of sculpture as a means of artistic expression, including an introduction to the planning and construction of three-dimensional forms using both traditional and contemporary techniques. A two-semester sequence provides experience with a variety of materials.

**ArtS 2500. Photography.** (ArtP; 3 cr; repetitive; SP–1600-1605; SP–1101-1106 [10 cr] or # offered when feasible)
Introduction to photography as an art medium. Composition and artistic expression explored through basic photographic techniques. Must have a 35 mm camera.

**ArtS 3000. Variable Topics in Studio Art.** (ArtP; 1–4 cr; repeatable to 12 cr; when topics change; SP–1600-1605; SP–1101-1106 [10 cr] or # offered when feasible)
Exploration of areas of particular interest or timeliness not covered by the regular curriculum.

**ArtS 3100f. Third-Year Drawing.** (ArtP; 3 cr; repeatable; SP–3503, 3504, 3505; SP–2101-2102 recommended)
Continued development of the skills and understandings required by traditional problems of drawing.

**ArtS 3110s. Third-Year Drawing.** (ArtP; 3 cr; repeatable; SP–3503, 3504, 3505; SP–2101-2102, 3100 recommended)
Emphasizes self-direction, experimental approaches and materials, and study of contemporary concepts.

**ArtS 3200f,s. Advanced Printmaking.** (ArtP; 3 cr; repeatable; SP–3600, 3601, 3602; SP–2202)
Further exploration of printmaking techniques and skills as a means of artistic expression. Students may register for either semester; however, a year’s continuous work is recommended.

**ArtS 3300f,s. Advanced Painting.** (ArtP; 3 cr; repeatable; SP–3700, 3701, 3702; SP–2302 or #)
Further development of painting as a means of artistic expression. Students may register for either semester; however, a year’s continuous work is recommended.

**ArtS 3400f,s. Advanced Sculpture.** (ArtP; 3 cr; repeatable; SP–3800, 3801, 3802; SP–2402)
Further development of sculpture as a means of artistic expression. Students may register for either semester; however, a year’s continuous work is recommended.

**ArtS 3881s. Junior Review.** (0 cr; prereq jr studio art major; S-N only)
Review by the studio art and art history faculty of the student’s work to date. Time of review and work presented decided in consultation with the adviser and the instructor of the major studio area. Normally taken spring semester.

**ArtS 4881f. Senior Review.** (0 cr; prereq sr studio art major; S-N only)
Review by the studio art and art history faculty of the student’s work, concentrating on the major media and including any work designated at the Junior Review. Time of review and work presented decided in consultation with the adviser and the instructor of the major studio area. Normally taken fall semester.
ArtS 4901s. Senior Exhibit. (0 cr; prereq sr studio art major or minor; S-N only)
Students consult with their adviser and the faculty member facilitating the exhibit for details.

ArtS 3993f,s, 4993f,s. Directed Study. (1-5 cr; repeatable; prereq #)
ArtS 4994f,s. Senior Honors Project. (1-5 cr; repeatable; prereq participation in Honors Program, #)
A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

Biology (Biol)

This discipline is in the Division of Science and Mathematics.

Objectives—The biology curriculum is designed to provide students with biological knowledge and to develop scientific skills as part of their liberal arts education. It prepares students for graduate or professional programs and for careers such as secondary biology education, government service, or private sector employment. Included in those skills are the abilities to conduct and interpret scientific research and to successfully communicate scientific information both verbally and in writing. The faculty believe these objectives can best be attained through a balanced core curriculum in biology and a diverse array of elective coursework, both of which include active lab and field experiences.

Major Requirements
Biol 1101—Biological Principles
Biol 2101—Evolution of Biodiversity
Biol 2111—Cell Biology
Biol 3101—Genetics
Biol 3111—Biochemistry
Biol 3121—Molecular Biology
Biol 3131—Ecology
Biol 4901—Senior Seminar
Chem 1101-1102—General Chemistry I-II
or Chem 1111-1112—Honors General Chemistry I-II
Chem 2301—Organic Chemistry I
Chem 2302—Organic Chemistry II
Chem 2311—Organic Chemistry Lab I
Math 1021—Survey of Calculus
or Math 1101—Calculus I
Math 1601—Introduction to Statistics
or Math 2601—Statistical Methods
at least 8 additional credits from:
Biol numbered 4000-4500
or
Psy 3211—Biological Psychology
Psy 3201—Comparative Psychology
or
Geol 3111—Introduction to Invertebrate Paleontology

Required courses may not be taken S-N unless offered S-N only. Up to 5 credits of coursework with a grade of D may be used to meet the major requirements if offset by an equivalent number of credits of A or B in the major.

Biology majors are advised to complete their chemistry and mathematics requirements as early as possible. All majors should have their programs approved by a biology adviser by the beginning of their junior year.

The speaking component is met in the biology major via the following course:
Biol 4901—Senior Seminar

The writing component of the general education requirements is met in the biology major via the following course, which requires writing assignments and/or term papers:
Biol 1101—Biological Principles

The computing component of the general education requirements is met in the biology major via the following courses, which utilize computer software in class and in processing data from experiments or field projects:
Biol 2111—Cell Biology
Biol 4311—Conservation Genetics

Minor Requirements
Biol 1101—Biological Principles
Biol 2101—Evolution of Biodiversity
Biol 2111—Cell Biology
two additional Biol courses numbered 3000-4500

Courses required for the minor may not be taken S-N. Up to 5 credits of coursework with a grade of D may be used to meet the minor requirements if offset by an equivalent number of credits of A or B in the major.

Teacher Preparation Requirements
Students interested in secondary teaching in biological (life) science must complete a biology major and meet the requirements of the secondary education licensure program. The secondary teaching minor in biological (life) science requires a biology minor and completion of the requirements of the secondary education licensure program. Consultation with a biology adviser and early completion of the basic science courses are recommended. Required courses may not be taken S-N unless offered S-N only.

Course Descriptions
Biol 1000. Variable Topics In Biological Thought.
(See specific topics for general education categories; 1-5 cr; repeatable when topic changes; no elective cr for biol majors or minors; offered when feasible)
Introduction to scientific method, illustrated by study of both classical and modern literature in biology. Some of
the properties of and challenges to organisms, with illustrations chosen from general or specific topics announced in advance. (lect and/or lab)

Biol 1051f. Wildlife Biology. (Sci-L; 4 cr; no elective credit for biol majors or minors; offered when feasible) Biological principles and practices illustrated through studies of North American wildlife. Wildlife taxonomy, identification, migration and dispersal, ecological relationships, contemporary problems associated with human activities. (two 65-min lect, one 120- or 180-min lab or field study)

Biol 1052f,s. Conservation Biology. (Sci-L; 4 cr; no elective cr for biol majors or minors; offered when feasible) Survey of topics in conservation biology, with emphasis on topics that have created controversy and debate: loss of biodiversity, endangered species preservation and management, habitat conservation, environmental degradation, and sustainable development. (two 65-min lect, one 120- or 180-min lab or field study)

Biol 1101f,s. Biological Principles. (Sci; 4 cr) Basic principles of biology, including cellular structure, organismal function, inheritance, and evolution. Emphasizes scientific methods and the biological literature. Includes small group discussions. First course of the biology major sequence. (three 65-min lect and discussion)

Biol 2101s. Evolution of Biodiversity. (Sci-L; 4 cr; SP–1101 or #) Analysis of evolutionary trends using historical and contemporary evidence. Principles of classification and phylogenetic reconstruction. Includes laboratory survey of the major groups of organisms. (two 65-min lect, one 120-min lab)

Biol 2102f. Human Anatomy. (3 cr; prereq soph) Same as WSS 2102. Structure of human systems at their organ and cellular levels. (one 100-min lect, one 120-min lab)

Biol 2111f. Cell Biology. (Sci-L; 4 cr; QP–Chem 1302 or Chem 1502; SP–1101, 1120, Chem 1102 or 1112) Cell structure and function. Includes topics pertaining to the chemistry, physiology, structure, and reproduction of plant and animal cells. (two 65-min lect and one 120-min lab)

Biol 3101s. Genetics. (Sci-L; 4 cr; QP–1114; SP–1101, 2111) Principles and mechanisms of inheritance and variation, including cytological, organismal, and population genetics; mechanisms of evolution; and the genetic problems of humans. (two 65-min lect, one 120-min lab)

Biol 3111f. Biochemistry. (Sci-L; 4 cr; QP–1114, Chem 3331, Chem 3332; SP–1101, 2111, Chem 2302 or #) Lectures, discussions, and lab experiments on the structures, functions, and biochemical transformations of proteins, carbohydrates, nucleic acids, and lipids. (three 50-min classes, one 180-min lab)

Biol 3121s. Molecular Biology. (Sci-L; 5 cr; QP–1114, 3200; 3500 recommended; SP–1101, 2111, 3310, Chem 2301) Principles and mechanisms of DNA function, protein synthesis, and gene regulation in prokaryotes and eukaryotes. Genetic engineering and evolution at the molecular level. (two 100-min lect, 180-min lab)

Biol 3131f. Ecology. (Sci-L; 4 cr; QP–1120; 3200 recommended; SP–1101, 2101) Basic principles and models of population biology, community structure and function, and ecosystem dynamics. Lab exercises emphasize fieldwork, techniques for characterizing local plant and animal communities, and experimental investigation of topics such as competition and behavioral ecology. (two 65-min lect, one 180-min lab and field study; weekend field trip required)

Biol 4000. Variable Topics in Advanced Biology. (See specific topics for general education categories; 1-5 cr; repeatable when topic changes; prereq depends on topic; offered when feasible) Treatment of advanced topics in biology not included in the regular curriculum. (lect, lect/lab, or lab only depending on topic)

Biol 4102s. Human Physiology. (Sci; 4 cr; QP–1114, Chem 1303 or Chem 1502; SP–1101, 2111, Chem 1102 or Chem 1112; offered even-numbered yrs) Function of human systems at their organ, cellular, and molecular levels. (three 65-min lect)

Biol 4111s. Microbiology. (Sci-L; 4 cr; QP–1114; 3200, 3500 recommended; SP–2111 or #; offered odd-numbered yrs) Lectures, discussions, and lab experiments on the morphology, physiology, genetics, taxonomy, and ecology of microorganisms, with an emphasis on prokaryotic microbes and viruses. (three 50-min lect, one 180-min lab)

Biol 4121s. Herpetology. (Sci-L; 4 cr; QP–1120; SP–2101; offered when feasible) Survey of amphibians and reptiles, including their evolution, systematics, identification, behavior, ecological relationships, and contemporary problems associated with human activities. (two 65-min lect, one 120-min lab and field studies)

Biol 4131f. Vertebrate Natural History. (Sci-L; 4 cr; QP–1120; SP–2101, offered even-numbered yrs) Survey of vertebrates, including their evolution, systematics, and ecological relationships. (two 65-min lect, one 180-min lab or field study)

Biol 4141f. Comparative Invertebrate Zoology. (Sci-L; 4 cr; QP–1120; SP–2101 or #; offered when feasible) Comparative study of the structure, function, natural history, development, and evolution of invertebrate animals. (two 65-min lect, 180-min lab)

Biol 4151f. Entomology. (Sci-L; 4 cr; QP–1120; SP–2101 or #; offered odd-numbered yrs) Structure, life histories, habits, and classification of common families of insects, including their economic significance. (two 65-min lect, 180-min lab; weekend field trip required)

Biol 4161. Evolution. (Sci; 4 cr; QP–3200, 3201 or #; offered when feasible) Survey of the history, evidence, and mechanisms of organic evolution. (three 65-min lect)

Biol 4171s. Plant Systematics and Evolution. (Sci-L; 4 cr; QP–1114, 1120; 3200 recommended; SP–2101; offered even-numbered yrs) Introduction to the identification and phylogenetics of land plants. Survey of the major trends in plant evolution, including morphological and life history variation among major plant taxa. Use of keys for local flora emphasized. (two 65-min lect, one 180-min lab and field study)
Biol 4301. Plant Biology. (Sci-L; 4 cr; QP-1114, 1120; SP-2101, 2111 or #; offered when feasible) Descriptive and experimental study of plants. Anatomy, development, physiology, secondary compounds, evolution, human uses of plants. (two 65-min lect, one 180-min lab)

Biol 4311f. Conservation Genetics. (Sci-L; 4 cr; QP-3200; Math 1150 or Math 3605 recommended; SP-3101; offered even-numbered yrs) Introduction to theory of population differentiation and gene flow; applications to managing and recovering rare species. Adaptive and neutral models, linkage disequilibria, effective population size, inbreeding depression, population genetic structure. Labs use computers to model genetic changes in populations and analyze genetic structure. (two 100-min lect, one 120-min lab)

Biol 4321s. Animal Physiology. (Sci-L; 4 cr; QP-1114; SP-2111; offered odd-numbered yrs) Functions of animal structures as they relate to coping with different environmental situations. (two 65-min lect, one 120-min lab)

Biol 4600. Practicum in Biology. (1-2 cr; repeatable to 4 cr; prereq ∆; no elective cr for biol majors or minors; S-N only) Supervised experience of selected activities; lab preparation/management, greenhouse care/management, animal care, curating museum/herbarium collections. Repeatable with different projects or activities.

Biol 4901f. Senior Seminar. (1 cr; required of all sr biology majors; prereq sr or #; full year course, students register and start attending in fall for whole year) Seminar on selected biological topics.

Biol 4993f,s. Directed Study. (1-5 cr; repeatable; prereq ∆)

Biol 4994. Senior Honors Project. (1-5 cr; repeatable; prereq participation in Honors Program, #) A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

Chemistry (Chem)

This discipline is in the Division of Science and Mathematics. Coursework in chemistry spans the four traditional areas of analytical, inorganic, organic, and physical chemistry. Ancillary areas such as biochemistry and geochemistry are available through interdisciplinary coursework with the biology and geology disciplines. Although majors concentrate primarily on chemistry, they must also do work in beginning physics and calculus. The beginning chemistry courses satisfy the physical sciences component of the general education requirements.

Chemistry majors, particularly in upper division courses, do hands-on work with chemical instrumentation and use computers in both software and hardware applications. The faculty prides itself on working closely with its students on undergraduate research projects, directed studies, and undergraduate teaching assistantships. In addition, chemistry majors are encouraged to complete summer research internships at university and industrial labs or at other research facilities, both locally and nationally.

Study in chemistry is the prerequisite for many preprofessional programs at UMM. Students who also do work in the Division of Education can obtain licensure in secondary education. About two-thirds of UMM’s chemistry majors pursue postgraduate work toward a doctoral degree—most of them in chemistry, many in medicine, but also in other health-related fields, such as veterinary medicine and dentistry, in biological fields related to chemistry, and in a variety of other fields. The other third directly enter the job market upon graduation, primarily in the chemical industry or in secondary education.

Objectives—The chemistry curriculum focuses on the structure of matter and the conditions required for material change. It is designed to prepare students for graduate study in chemistry or related fields or for a career in the chemical industry or in secondary teaching.

Major Requirements

Chem 1101-1102—General Chemistry I-II or Chem 1111-1112—Honors General Chemistry I-II
Chem 2301—Organic Chemistry I
Chem 2302—Organic Chemistry II
Chem 2311—Organic Chemistry Lab I
Chem 2321—Introduction to Research
Chem 3101—Analytical Chemistry
Chem 3501—Physical Chemistry I
Chem 3502—Physical Chemistry II
Chem 3511—Physical Chemistry Lab
Chem 4901—Chemistry Seminar I
Chem 4902—Chemistry Seminar II

two courses from:

Chem 3111—Instrumental Analysis
Chem 3701—Inorganic Chemistry
Chem 3811—Macromolecules
Chem 4100—Variable Topics in Analytical Chemistry
Chem 4300—Variable Topics in Organic Chemistry
Chem 4500—Variable Topics in Physical Chemistry
Chem 4700—Variable Topics in Inorganic Chemistry or another course approved by the chemistry discipline

in addition, the chemistry major requires:

Math 1101—Calculus I
Math 1102—Calculus II
Phys 1101—General Physics I
Phys 1102—General Physics II
Required courses may not be taken S-N unless offered S-N only. Up to 8 credits of coursework with a grade of D may be used to meet the major requirements if offset by an equivalent number of credits of A or B.

Students should consult members of the chemistry faculty in order to plan programs of study appropriate to their interests and postgraduate goals.

**Minor Requirements**

Chem 1101-1102—General Chemistry I-II

or

Chem 1111-1112—Honors General Chemistry I-II

three additional Chem lecture courses numbered 2301 or above, two of which must include lab or have a concurrent lab registration

Required courses may not be taken S-N except where noted. Up to 8 credits of coursework with a grade of D may be used to meet the minor requirements if offset by an equivalent number of credits of A or B.

**Teacher Preparation Requirements**

Chemistry is part of the requirement for licensure in physical science. For this program, students must acquire a high level of competency in chemistry or physics. The chemistry emphasis is listed here; the physics emphasis is listed in the physics section. Note that either emphasis will satisfy the licensure requirement.

For the chemistry emphasis, students must complete:

Chem 1101-1102—General Chemistry I-II

or

Chem 1111-1112—Honors General Chemistry I-II

Chem 2301—Organic Chemistry I

Chem 2302—Organic Chemistry II

Chem 2311—Organic Chemistry Lab I

Chem 2312—Organic Chemistry Lab II

Chem 3101—Analytical Chemistry

Chem 3501—Physical Chemistry I

two additional Chem lecture courses at the 3xxx level or above

Phys 1101—General Physics I

Phys 1102—General Physics II

Phys 2101—Modern Physics

Phys 2201—Circuits and Electronic Devices

Phys 3301—Optics

required professional education courses, including methods (SciE 4103—Methods of Teaching Science in the Secondary School) and student teaching in chemistry

The teaching minor in chemistry requires:

Chem 1101-1102—General Chemistry I-II

or

Chem 1111-1112—Honors General Chemistry I-II

Chem 2301—Organic Chemistry I

Chem 2311—Organic Chemistry Lab I

Chem 3101—Analytical Chemistry

Chem 3501—Physical Chemistry I

3 additional credits in an approved Chem lecture course at the 3xxx level or above

required professional education courses, including methods (SciE 4103—Methods of Teaching Science in the Secondary School) and student teaching in chemistry

Early consultation with an adviser in chemistry is recommended for those pursuing licensure in physical science.

Required courses may not be taken S-N unless offered S-N only.

**Course Descriptions**

**Chem 1101f. General Chemistry I.** (Sci-L; 4 cr; SP–Math 0901 or placement beyond Math 0901 using ACT/placement exam score)

Scientific method, measurements, nomenclature, stoichiometry, atomic and molecular structure, chemical periodicity, and properties of common elements and ions. Development of scientific reasoning and problem-solving skills. Lab exercise concomitant with these topics. (3 hrs lect, 3 hrs lab)

**Chem 1102s. General Chemistry II.** (Sci-L; 4 cr; QP–1302 or 1501; SP–1101)

Continuation of Chem 1101. Chemical bonding, states of matter, solutions, acid-base chemistry, chemical equilibrium, oxidation-reduction reactions, kinetics, thermodynamics, quantum theory, nuclear chemistry, organic chemistry, and biochemistry. (3 hrs lect and rec, 3 hrs lab)

**Chem 1111f. Honors: General Chemistry I.** (Sci-L; 4 cr; SP–1 yr high school chem, ¶Math 0901 or placement beyond Math 0901 using ACT/placement exam score; 3 yrs high school math recommended)

Brief review of stoichiometry, atomic structure, periodicity, and nomenclature. Properties of solids, liquids, and gases; solutions; thermodynamics. Lab exercises in general chemistry. Assumes substantial background in high school chemistry and mathematics. (3 hrs lect and rec, 3 hrs lab)

**Chem 1112s. Honors: General Chemistry II.** (Sci-L; 4 cr; QP–1501; SP–1111, #for students not in Honors Program)

Continuation of Chem 1111. Kinetics, equilibrium, acid-base chemistry, solubility, coordination equilibria, thermodynamics, and electrochemistry. Overview of s- and p-block elements and transition metal chemistry. Lab exercises include qualitative analysis and inorganic synthesis and related analyses. (3 hrs lect and rec, 3 hrs lab)

**Chem 2301f. Organic Chemistry I.** (Sci-L; 4 cr; QP–1303 or 1502; SP–1102 or 1112)

Introduction to the structure and reactivity of organic molecules; nomenclature and functional groups; stereochemistry; mechanisms of substitution and elimination pathways; physical organic chemistry; introduction to synthetic strategy; fundamentals of spectroscopic techniques. (4 hrs lect)
Chem 2302s. Organic Chemistry II. (Sci; 3 cr; QP–3332; SP–2301)
Continuation of topics from Chem 2301; spectroscopy; chemistry of polyenes, aromatic systems, and amines; enol and enolate chemistry; free-radical chemistry; retrosynthetic analysis; special topics. (3 hrs lect)

Chem 2311f. Organic Chemistry Lab I. (1 cr; QP–1303 or 1502; SP–2301)
Development of lab techniques in organic chemistry; experimental problem solving. (3 hrs lab)

Chem 2312s. Organic Chemistry Lab II. (1 cr; QP–3333; SP–2311)
Experiments in organic chemistry; synthesis and experimental design; spectral analysis. (3 hrs lab)

Chem 2321s. Introduction to Research. (Sci-L; 2 cr; QP–3333; SP–2320)
Interdisciplinary approach to experiment design and analysis of data. Synthesis of organic, organometallic, and/or inorganic compounds, with emphasis on purification and characterization using instrumental methods. Instruction in use of the scientific literature and scientific report writing. (6 hrs lab)

Chem 3101f. Analytical Chemistry. (Sci-L; 4 cr; QP–1303 or 1502; SP–1102 or 1112)
Aqueous chemical equilibrium for acid-base, oxidation-reduction, and complexometric chemical systems; fundamentals of quantitative analytical chemistry; titrimetric and gravimetric methods of analysis; basic chemical instrumentation with emphasis on spectrophotometric methods of analysis. (3 hrs lect, 3 hrs lab)

Chem 3111. Instrumental Analysis. (Sci-L; 4 cr; QP–3110; SP–3101)
Principles of chemical instrumentation and experimental methods of analysis; extensive lab work using chromatographic, spectrophotometric, and electrochemical methods of analysis.

Chem 3501f. Physical Chemistry I. (Sci; 4 cr; QP–1303 or 1502; Math 1202, Phys 1200; SP–1102 or 1112, Phys 1101, Math 1102 or #)

Chem 3502s. Physical Chemistry II. (Sci; 3 cr; QP–3532; SP–3501)
Introduction to quantum theory. Atomic and molecular structure. Spectroscopy. Introduction to statistical mechanics. Chemical dynamics. Topics drawn from the liquid and solid states, advanced kinetics, electrochemistry, and surfaces. (3 hrs lect)

Chem 3511s. Physical Chemistry Lab. (1 cr; QP–3530; SP–3502)
Lab experiments to illustrate physico-chemical principles and to develop skills in data collection, analysis, and interpretation and in report writing. (3 hrs lab)

Chem 3701. Inorganic Chemistry. (Sci; 3 cr; QP–3530; SP–3501)
The periodic table; survey of nomenclature, symmetry, structure, and bonding theory of inorganic compounds, with emphasis on coordination compounds.

Chem 3801. History of Chemistry. (Sci; 3 cr; no elective cr for chem majors or minors; QP–3330; SP–2301 or #)

Chem 3811. Macromolecules. (Sci; 3 cr; QP–3332, 3532; SP–2301, 3501 or #)

Chem 4100. Variable Topics in Analytical Chemistry. (Sci; 2-5 cr; repeatable when topic changes; QP–3110; SP–3101 or #)
Advanced topics in chromatographic, spectrophotometric, or electroanalytical methods of chemical analysis.

Chem 4300. Variable Topics in Organic Chemistry. (Sci; 2-5 cr; repeatable when topic changes; QP–3332, SP–2302)
Advanced topics in synthetic organic, organometallic, or bio-organic chemistry as shaped by student interest.

Chem 4500. Variable Topics in Physical Chemistry. (Sci; 2-5 cr; repeatable when topic changes; QP–3532; SP–3502 or #)
Advanced topics in molecular structure, group theory, and statistical mechanics as shaped by student interest.

Chem 4700. Variable Topics in Inorganic Chemistry. (Sci; 2-5 credits; repeatable when topic changes; QP–3720; SP–3701 or #)
Bonding and properties of coordination compounds.

Chem 4894. Research. (1-5 cr; repeatable; prereq #)

Chem 4901f. Chemistry Seminar I. (0 cr; required of all chem majors; may not count toward chem minor; QP–3410; SP–2321; S-N only)
Presentations by faculty, guest speakers, and students on topics of current research interest. Students are required to present one seminar for the Chem 4901-4902 sequence.

Chem 4902s. Chemistry Seminar II. (1 cr; required of all chem majors; may not count toward chem minor; QP–4901; S-N only)
Continuation of Chemistry Seminar I.

Chem 4993f,s, 2993f,s, 3993f,s, 4993f,s, Directed Study. (1-5 cr; repeatable; prereq #)

Chem 4994f,s. Senior Honors Project. (1-5 cr; repeatable; prereq participation in Honors Program, #)
A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

Computer Science (CSci)

This discipline is in the Division of Science and Mathematics.

Objectives—The computer science curriculum is designed to provide students with a strong foundation in the diverse and rapidly changing field of computing. The science of computing is emphasized with a focus on fundamental principles and the formal underpinnings of the field. Students are encouraged to use and
supplement their formal education through a variety of research opportunities, participation in discipline colloquia and student/professional organizations, and pursuit of internship experiences or international studies opportunities. Students who successfully complete the major are qualified to enter the computing field as professionals or to pursue graduate studies.

**Major Requirements**

CSci 1301–1302—Problem Solving and Algorithm Development I-II
CSci 2101—Data Structures
CSci 3401—Models of Computing Systems
CSci 3501—Algorithms and Computability
CSci 3601—Software Design and Development
CSci 3901—Seminar

14 credits of electives. Elective credits must meet a distribution requirement of at least 4 credits in each area (CSci 44xx, 45xx, and 46xx), with at least two 4-credit courses (CSci 4x5x) in different areas and three 2-credit courses (CSci 4x0x)

in addition, majors must complete a Hum general education course outside the major and 12 credits of appropriate Math courses numbered 1101 and above (not to include Math 1601 or Math 2211)

majors also must complete at least 8 credits from biology, chemistry, geology, or physics

Up to 8 credits of coursework with a grade of D may be used to meet the major requirements if offset by an equivalent number of credits of A or B.

**Minor Requirements**

CSci 1301-1302—Problem Solving and Algorithm Development I-II
CSci 2101—Data Structures

*two courses chosen from:

CSci 3401—Models of Computing Systems
CSci 3501—Algorithms and Computability
CSci 3601—Software Design and Development

in addition, students minoring in computer science must complete at least 4 credits of Math courses numbered 1020 and above (not to include Math 2211)

Up to 8 credits of coursework with a grade of D may be used to meet the minor requirements if offset by an equivalent number of credits of A or B.

**Course Descriptions**

**CSci 1001. Introduction to Computer Science. (M/SR; 2 cr)**
Basic hardware and software concepts, elementary data representation, problem solving techniques, algorithm development, and current information processing and network applications.

**CSci 1301. Problem Solving and Algorithm Development I. (M/SR; 4 cr)**
Simple searching and sorting algorithms, lists and trees, introduction to major programming paradigms, basic proof techniques including induction and invariants, simple Big-Oh analysis of algorithms, simple set theory and logic.

**CSci 1302. Problem Solving and Algorithm Development II. (M/SR; 4 cr; QP–1200, 1400; SP–1301)**
Study of the functional programming paradigm, concentrating on recursion over lists, trees, and graphs; proving program correctness through induction; regular expressions; an introduction to objects.

**CSci 2101. Data Structures. (M/SR; 4 cr; QP–1300, 1400; SP–1302)**
Introduction to data types, including: stacks, queues, trees, and graphs; implementation of abstract data types, using object-oriented techniques and reusable libraries.

**CSci 3401s. Models of Computing Systems. (M/SR; 4 cr; QP–3300; SP–2101)**
Basics of computing systems, models of networks and operating systems, and issues such as deadlock, scheduling, protection and security, data management, intercomputer communication, the OSI model, and the three lower layers and their instantiation in TCP/IP.

**CSci 3501f. Algorithms and Computability. (M/SR; 4 cr; QP–3300; SP–2101)**
Models of computation (Turing machines, lambda calculus, deterministic and non-deterministic machines); approaches to the design of algorithms, determining correctness and efficiency of algorithms; complexity classes, NP-completeness, approximation algorithms.

**CSci 3601. Software Design and Development. (M/SR; 4 cr; QP–3300; SP–2101)**
Design and implementation of medium- and large-scale software systems. Principles of organizing and managing such designs and implementations throughout their lifetime. Designing for modularity and software reuse; use of libraries. Dynamics of working in groups. Group lab work on a substantial software project. (3 hrs lect, 3 hrs lab)

**CSci 3901. Seminar. (Hum; 2 cr; QP–3300; SP–2101)**
Familiarizes students with the literature of the field, including historical development and ethical and social implications of technology. Students will analyze various articles or similarly published works, synthesize their contents, make formal presentations, and attend and evaluate the presentations of their peers. Students will have multiple speaking and writing experiences.

**CSci 4400. Variable Topics in Computing Systems. (M/SR; 2 cr; repeatable when topic changes; QP–3200; SP–3401; $3901 or # offered when feasible)**
Current developments in computer networks, operating systems, system programming, computer architecture, parallel and distributed architectures, databases, artificial intelligence, graphics, approximation algorithms, artificial life, computer music, etc.

**CSci 4450. Variable Topics in Computing Systems. (M/SR; 4 cr; repeatable when topic changes; QP–3200; SP–3401; offered when feasible)**
Topics in computing systems, such as computer networks, operating systems, system programming, computer architecture, parallel and distributed architectures, databases, artificial intelligence, graphics, approximation algorithms, artificial life, computer music.
Division Structure and Course Descriptions

CSci 4500. Variable Topics in Theory. (M/SR; 2 cr; repeatable when topic changes; QP-3510; SP-3501; ¶3901 or #; offered when feasible)
Current developments in analysis of algorithms, theory of computation, distributed algorithms, parallel algorithms, approximation algorithms, graph theory, computational geometry, NP-completeness, etc.

CSci 4550. Variable Topics in Theory. (M/SR; 4 cr; repeatable when topic changes; QP-3510; SP-3501; offered when feasible)
Topics in theory, such as analysis of algorithms, theory of computation, distributed algorithms, parallel algorithms, approximation algorithms, graph theory, computational geometry, and NP-completeness.

CSci 4600. Variable Topics in Programming Languages and Program Translation. (M/SR; 2 cr; repeatable when topic changes; QP-3190; SP-3601; ¶3901 or #; offered when feasible)
Current developments in software engineering, requirements analysis, specification, software architectures, formal methods, program derivation, testing, parallel and distributed languages, parsing, optimization techniques, compiling, etc.

CSci 4650. Variable Topics in Programming Languages and Program Translation. (M/SR; 4 cr; repeatable when topic changes; QP-3190; SP-3601; offered when feasible)
Topics in programming languages and program translation, such as software engineering, requirements analysis, specification, software architectures, formal methods, program derivation, testing, parallel and distributed languages, parsing, optimization techniques, and compiling.

CSci 4993,s. Directed Study. (1-5 cr; repeatable; prereq #)
CSci 4994,f,s. Senior Honors Project. (1-5 cr; repeatable; prereq participation in Honors Program, #)
A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

Economics (Econ)

This discipline is in the Division of the Social Sciences.

Objectives—The economics curriculum is designed to ensure that students:

a) understand the nature and functioning of the market system
b) are able to define criteria for assessing efficiency in the provision of goods and services
c) investigate and assess the operation of economic institutions
d) are able to evaluate alternative policies intended to enhance economic outcomes
e) develop competence in quantitative methods and computing methods
f) are able to conceptualize and analyze problems using the tools of economic theory, and communicate the results
g) are competent in oral and written communication
h) are adequately prepared for graduate or professional school.

Major Requirements
Econ 1101—Principles of Economics
Econ 3201—Microeconomic Theory
Econ 3202—Macroeconomic Theory
Econ 3501—Introduction to Econometrics
Econ 4900—Variable Topics in Economic Research
Math 1021—Survey of Calculus
Math 1601—Introduction to Statistics

14 additional credits in Econ courses at the 3xxx level and above

Grades of D in Econ 1101, Math 1021, and Math 1601 may not be used to meet major requirements. Up to 4 credits of other economics coursework with a grade of D may be used to meet major requirements if offset by an equivalent number of credits of A or B. Required courses may not be taken S-N unless offered S-N only.

Note: Students should complete Econ 1101—Principles of Economics
Math 1021—Survey of Calculus
Math 1601—Introduction to Statistics
or their equivalents during the first two years.

Minor Requirements
Econ 1101—Principles of Economics
Econ 3201—Microeconomic Theory
Econ 3202—Macroeconomic Theory
Math 1021—Survey of Calculus
Math 1601—Introduction to Statistics

6 additional credits in Econ courses at the 3xxx level or above

Grades of D in Econ 1101, Math 1021, and Math 1601 may not be used to meet minor requirements. Required courses may not be taken S-N unless offered S-N only.

Teacher Preparation Requirements
Students seeking teaching licensure in any of the social sciences must complete a social science major. Economics majors seeking teaching licensure must also complete a social science major and the required professional education courses, including methods (SScE 4103—Methods of Teaching Social Science in the Secondary School) and student teaching in social studies. Required courses may not be taken S-N unless offered S-N only.
Course Descriptions

Econ 1101f,s. Principles of Economics. (SS; 4 cr; prereq high school algebra or #)
Introduction to the study of scarce resource allocation in a market economy. Supply and demand, consumer theory, the theory of the firm, market structure, pricing of the factors of production. Measurement of economic performance; national income, inflation, and unemployment; competing macroeconomic theories; stabilization policies.

Econ 1951f,s. Seminar for Social Science Majors. (1 cr; QP–1101, 1102; SP–1101; no cr for students who are concurrently enrolled in or have received cr for 3xxx Econ courses; S-N only)
Familiarization with various journals, periodicals, and sources of statistical information that deal with current developments in economics.

Econ 3000. Variable Topics in Economics. (See specific topics for general education categories; 2 cr; repeatable when topic changes; QP–1101, 1102; SP–1101 or #; offered when feasible)
Topic to be announced.

Econ 3111f. Money and Financial Markets. (SS; 2 cr; QP–1101, 1102; SP–1101 or #)
Nature and functions of money; definitions of money; structure and function of Federal Reserve system; quantity theory of money; value of money; gold vs. paper standard; interest rate fundamentals and behavior; risk and term structure of interest rates; foreign exchange market; bond and stock market.

Econ 3112f. Money and Banking. (SS; 2 cr; QP–3101; SP–3111 or #)
Bank management; fractional reserve banking and role of commercial banks and other financial institutions; the complete money supply model; Federal Reserve monetary policy; theories of how money affects the real sector; liquidity preference theory; history of banking and banking legislation; history of the business cycle; the banking crisis of 1975-1992; integration of financial markets, banking system, the central bank, the demand for money, and financial panics.

Econ 3121f. Microeconomic Theory. (SS; 4 cr; QP–1101, Math 1140; SP–1101, Math 1021 or #)
Analytical approach to decision making by individual economic units in the output and input markets, under perfect and imperfect market conditions. Externalities and role of government.

Econ 3122f. Macroeconomic Theory. (SS; 4 cr; QP–1102, Math 1140; SP–1101, Math 1021 or #)
The theory of national income determination; inflation, unemployment, and economic growth in alternative models of the national economy.

Econ 3201f. International Trade Theory. (SS; 2 cr; QP–1101, Math 1140; SP–1101, Math 1021 or #)
Overview of why trade occurs, pattern of trade and international factor movement. Effect of trade and trade policy on the economy. Current topics in trade theory.

Econ 3202f. Honors: International Trade Theory. (SS; 2 cr; QP–3101; SP–3201 or 3202; offered when feasible)
Same as Econ 4121. Overview of why trade occurs,
pattern of trade and international factor movement. Effect of trade and trade policy on the economy. Current topics in trade theory.

Econ 4131s. International Finance. (SS; 2 cr; QP–3102; SP–3202 or #) Foreign exchange markets; theories of exchange rate determination; fixed vs. flexible rate systems; theories of balance of payments adjustments; international quantity of money theory; international reserves; international monetary system (past, present, and future); internal and external balance, international economic policy coordination, international debt problem; effect of international sector on domestic growth and stability.

Econ 4132s. Honors: International Finance. (SS; 2 cr; QP–3102; SP–3202 or #; for students not in Honors Program) Same as Econ 4131. Foreign exchange markets; theories of exchange rate determination; fixed vs. flexible rate systems; theories of balance of payments adjustments; international quantity of money theory; international reserves; international monetary system (past, present, and future); internal and external balance, international economic policy coordination, international debt problem; effect of international sector on domestic growth and stability.

Econ 4900f,s Variable Topics in Economic Research. (See specific topics for general education categories; 2 cr; repeatable when topic changes; QP–3101, 3102; SP–3201, 3202 or #) Guided research sessions. Familiarize students with literature in the field. Research topics include case studies of international or national topics within the discipline or any significant economic issue. Students are required to make a formal presentation on their research topic and attend presentations by their peers.

Econ 4901f. Labor Economics. (2 cr; QP–3101, 3102; SP–3201, 3202 or #)

Econ 4902s. Development Economics. (2 cr; QP–3101, 3102; SP–3201, 3202 or #)

Econ 4903s. International Economics. (2 cr; QP–3101, 3102; SP–3201, 3202 or #)

Econ 4904f. Public Economics. (2 cr; QP–3101, 3102; SP–3201, 3202 or #)

Econ 1993f,s, 2993f,s, 3993f,s, 4993f,s. Directed Study. (1-5 cr; repeatable; prereq #)

Econ 4994. Senior Honors Project. (1-5 cr; repeatable; prereq participation in the Honors Program; #) A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

The Division of Education offers a major and teaching licensure in elementary education (K–6). Licensure of secondary school teachers (7–12) is offered for majors in studio art, earth science (geology), English, French, German, life science (biology), mathematics, music, physical science (chemistry, physics), social science, Spanish, speech communication, speech-theatre, and theatre arts; and for minors in chemistry, earth science (geology), French, German, life science (biology), mathematics, physics, Spanish, speech communication, and theatre arts. Coursework for head varsity coaches in Minnesota is also offered.

Teacher education at UMM is part of the lifelong development of an effective teacher that includes an individual’s study of liberal arts disciplines and pedagogy, teaching, and other life experiences. UMM’s teacher education program is based on a belief that a successful teacher is one who reflects on teaching and makes instructional decisions that encourage student reflection and learning.

Teacher education at UMM uses personalized instruction and opportunities for student teaching within and outside the United States to prepare teachers who can employ human, technological, and other resources in the effective instruction of diverse populations of learners. The program introduces prospective teachers to the teaching profession and prepares them to demonstrate:

1) **knowledge** of themselves and of learners, liberal arts disciplines, and diverse social organizations and societies, including non-Western cultures, human growth and development, communication and language, problem solving, and effective teaching and learning;

2) **skill** in all aspects of the teaching act, including setting objectives; choosing content, materials, and instructional activities; teaching; and evaluating oneself, the teaching process, and the outcomes of learning;

3) **dispositions** associated with effective teaching and the assessment of oneself in relation to learners and learning;

4) **leadership** when confronting educational issues.

Admission requirements must be met and admission granted before students can enroll in courses in either the elementary or secondary teacher education programs. These admission requirements are set by UMM and the state of Minnesota. They are described under “Admission to the Major” in the “Education,
Elementary (ElEd) section and “Admission to the Program” in the “Education, Secondary (SeEd)” section of this bulletin. Neither the elementary nor the secondary education program can be completed in one year.

**Education (Ed)**

This discipline is in the Division of Education. It is designed to meet general education requirements and is not limited to students pursuing teaching licensure.

**Objectives**—These courses are designed to offer students the opportunity to study education and its role in society.

**Course Descriptions**

**Ed 1051s. Comparative Education.** (IP; 4 cr)
Critical thinking abilities and insight into other cultures developed through study of education in selected countries and the United States.

**Ed 2101f,s. Foundations and Issues in Education.** (1 cr; prereq soph)
History, philosophy, and purposes of American education; teaching as a profession; issues and trends in education today. Career opportunity and certification requirements in education. In addition to class sessions, students complete 30 hours of preprofessional field experience in the schools.

**Ed 3101f. Honors: Ethics and Decision Making in Education I.** (E/CR; 4 cr; prereq upper div status, # for students not in Honors Program)
Study of educational decision making in different settings through analysis and development of case studies, seminar discussion, and independent research, including interviews with decision makers and participation in meetings of policy-making agencies.

**Ed 3102s. Honors: Ethics and Decision Making in Education II.** (1-4 cr; QP–3001; SP–3101; prereq # for students not in Honors Program)
Study of educational decision making in different settings through analysis and development of case studies, seminar discussion, and independent research, including interviews with decision makers and participation in meetings of policy-making agencies.

**Ed 1993f,s, 2993f,s, 3993f,s, 4993f,s. Directed Study.** (1-5 cr; repeatable; prereq #)

**Ed 4994f,s. Senior Honors Project.** (1-5 cr; repeatable; prereq participation in Honors Program, #)
A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

**Education, Elementary (ElEd)**

This discipline is in the Division of Education. The elementary education major leads to Minnesota licensure as a teacher of grades 1 through 6. Students interested in licensure in kindergarten education must complete additional requirements. A separate admissions process must be completed and admission granted before students can enroll in these programs.

**Objectives**—Coursework leading to a degree in elementary education is designed to meet standards of effective practice required for licensure by providing prospective teachers with opportunities to understand concepts, tools of inquiry, and structures of disciplines taught in the elementary school; understand children and adolescents and their individual and group behavior; plan and implement instruction adapted to learners of diverse backgrounds and abilities; communicate effectively; encourage critical thinking and problem solving; use formal and informal methods of assessment; and collaborate with parents/guardians, families, school colleagues, and the community in an ethical manner.

**Admission to the Major**

During fall semester of the sophomore year, students are expected to attend an application meeting to begin the application process. Applications must be submitted to the Elementary Education Admissions Committee by the end of the first week of spring semester for entry to the program fall semester of the junior year. Enrollment in the major is limited. The decision to admit is made during spring semester, before fall registration. The elementary education course sequence begins in fall semester.

Students transferring from another school must be admitted to UMM before admission to the elementary major can be offered. It is recommended that these students seek academic planning advice from a member of the elementary education faculty before the semester in which admission to the program is sought.

Requirements for admission include the following:

1. Satisfactory completion of Psy 1061—Introduction to the Development of the Child and Adolescent and Ed 2101—Foundations and Issues in Education; (Psy 1051—Introduction to Psychology is strongly recommended)
Division Structure and Course Descriptions

2. Passing score on the Division of Education writing proficiency test or minimum passing score, as established for the State of Minnesota, on the examination of writing skills of the Preprofessional Skills Test (PPST)
3. Must have taken the PPST before enrolling in elementary education courses (date and location determined by Minnesota Board of Teaching; inquire at Student Counseling for details)
4. A minimum GPA of 2.50 overall and in required education courses
5. Approximately 60 credits completed by the end of the sophomore year
6. Approval of the faculty based on an interview, recommendations, assessment of prior experience (especially with children and other cultures), and progress toward a degree
7. Prior status as a student admitted to UMM

Student Teaching Requirements
2. A minimum GPA of 2.50 overall and in the elementary education major
3. Satisfactory completion of tutor aide and practicum experiences
4. Spch 1000—Variable Topics in Introduction to Public Speaking or Spch 1051—Introduction to Public Speaking or exemption granted by petition to the Division of Education based on satisfactory completion of at least a semester-length high school speech course
5. Approval of teacher education faculty

Major Requirements
Students must complete:
Psy 1061—Introduction to the Development of the Child and Adolescent
Ed 2101—Foundations and Issues in Education
ElEd 3101—Teaching and Learning Strategies
ElEd 3102—Reading in the Elementary School
ElEd 3103—Mathematics in the Elementary School
ElEd 3104—Art in the Elementary School
ElEd 3105—Music in the Elementary School
ElEd 3106—Physical Education in the Elementary School
ElEd 4101—Special Education
ElEd 4102—Social Studies in the Elementary School
ElEd 4103—Science and Health in the Elementary School
ElEd 4104—Language Arts and Literature in the Elementary School
ElEd 4105—Practicum: Experience in the Elementary School Classroom
ElEd 4106—Beginning Student Teaching
ElEd 4201—Directed Student Teaching in Primary and Intermediate Grades
ElEd 4901—The Teacher and Professional Development.

All courses required for a major in elementary education must be completed with a grade of C or higher.

Elementary Licensure Requirements
Students planning to teach in Minnesota elementary schools must meet the licensure requirements of the Minnesota Board of Teaching (BOT).

At the University of Minnesota, Morris, the following program is designed to meet the current BOT requirements. These course requirements are subject to change when the BOT implements new licensure rules.
1. All requirements for an elementary education major
2. One Math course at the 1xxx level or above (or CLEP equivalency)
3. Courses in the humanities, including courses from three different areas, such as (but not limited to) art, literature, music, philosophy, and theatre
4. Courses from four areas in the natural and social sciences. At least one course must be in the natural sciences, such as (but not limited to) life science, earth science, and physical science; at least one course must be in the social sciences, such as (but not limited to) anthropology, economics, geography, history, political science, psychology, and sociology
5. WSS 1101—First Aid and Psy 1081—Drugs and Human Behavior
6. Human relations training that satisfies Minnesota Board of Teaching Rules, part 8700.2700
7. Senior Presentation: A reflective summary of the student as teacher presented to an audience of educators and peers following successful completion of student teaching
8. A minimum GPA of 2.50 overall and in the elementary education major
9. All courses required for teaching licensure in elementary education must be completed with a grade of C or higher
10. A passing score on the Minnesota Board of Teaching Preprofessional Skills Test (PPST)
11. A positive recommendation from the discipline and Division of Education

Note: Students in elementary education must complete licensure requirements and apply for licensure within seven years from time of admission to the licensure program. After seven years, all education courses previously taken become void and must be retaken for licensure.
Required courses may not be taken S-N unless offered S-N only.

Kindergarten Licensure Requirements
Students who seek additional state teaching licensure in kindergarten education apply for the program during the fall semester of the junior year. Enrollment is limited. Applicants are notified of admission to the program at the end of the fall semester.

Students must complete:
1. The elementary education licensure program
2. ElEd 3201—Kindergarten Education and ElEd 4203—Directed Student Teaching in Kindergarten

Area of Concentration or Minor
It is recommended that students complete an area of concentration or a minor supportive of elementary education.

1. To complete an area of concentration, at least 16 credits are required. Students should seek approval of their plan for an area of concentration from a member of the elementary education faculty.
2. Students seeking a non-education major or minor should consult this catalog for requirements in the area of interest.

Course Descriptions

ElEd 3101f. Teaching and Learning Strategies. (4 cr; admission to the elementary teacher education program)
Elementary school teaching and learning. Planning for instruction, learning theory, multicultural education, classroom management, use of technology in the classroom. Includes a 30-hour field experience in elementary classrooms.

ElEd 3102f. Reading in the Elementary School. (4 cr; prereq admission to elementary teacher education program)
Beginning and advanced reading instruction in the elementary grades. Includes study of theory, issues, word recognition and comprehension strategies, reading materials, assessment, and group management.

ElEd 3103f. Mathematics in the Elementary School. (2 cr; prereq admission to the elementary teacher education program)
Standards, curriculum, assessment, and methodology for teaching mathematics in the elementary school. Includes the theoretical basis of methodology in mathematics and its application, measurement and evaluation, selection and use of instructional media and computer software, and meeting the needs of culturally diverse and special needs students.

ElEd 3104s. Art in the Elementary School. (0.5 cr; SP—admission to the elementary teacher education program, 3101, 3102, 3103 or #)
Scope, sequence, and related activities in elementary art.

ElEd 3105s. Music in the Elementary School. (0.5 cr; SP—admission to the elementary teacher education program, 3101, 3102, 3103 or #)
Scope, sequence, and related activities in elementary music.

ElEd 3106s. Physical Education in the Elementary School. (0.5 cr; SP—admission to the elementary teacher education program, 3101, 3102, 3103 or #)
Scope, sequence, and related activities in elementary physical education.

ElEd 3201 (Intersession). Kindergarten Education. (4 cr; QP—3100, 3110, 3111, 3112, 3113; SP—3101, 3102, 3103, 3104, 3105, 3106; prereq admission to the elementary teacher education program)
Foundations, issues, methods, and materials for kindergarten education. Developmentally appropriate curriculum, assessment, and methodology for teaching kindergarten children. Required for students desiring kindergarten endorsement.

ElEd 4101f. Special Education. (2 cr; QP—3100, 3110, 3111, 3112, 3113; SP—3101, 3102, 3103, 3104, 3105, 3106; prereq admission to the elementary teacher education program)
Strategies associated with special needs students.

ElEd 4102f. Social Studies in the Elementary School. (2 cr; QP—3100, 3110, 3111, 3112, 3113; SP—3101, 3102, 3103, 3104, 3105, 3106; prereq admission to the elementary teacher education program)
Outcomes, content, integration strategies, and assessment of social studies instruction in the elementary curriculum.

ElEd 4103f. Science and Health in the Elementary School. (3 cr; QP—3100, 3110, 3111, 3112, 3113; SP—3101, 3102, 3103, 3104, 3105, 3106; prereq admission to the elementary teacher education program)
Standards, curriculum, and assessment of elementary school science and health. Includes theoretical basis of methodology and its application, assessment, selection and use of instructional media and computer software, and meeting the needs of cultural diverse and special needs students.

ElEd 4104f. Language Arts and Literature in the Elementary School. (3 cr; QP—3100, 3110, 3111, 3112, 3113; SP—3101, 3102, 3103, 3104, 3105, 3106; prereq admission to the elementary teacher education program)
Outcomes, content, strategies, and assessment of language arts and children’s literature in the elementary classroom.

ElEd 4105f. Practicum: Experience in the Elementary School Classroom. (2 cr; QP—3100, 3110, 3111, 3112, 3113; SP—3101, 3102, 3103, 3104, 3105, 3106; prereq admission to the elementary teacher education program)
Field experience in the elementary classroom.

ElEd 4106f. Beginning Student Teaching. (2 cr; QP—3100, 3110, 3111, 3112, 3113; SP—3101, 3102, 3103, 3104, 3105, 3106; prereq admission to the elementary teacher education program)
Participation in inservice, teaching, and teaching-related activities in preparation for student teaching.

ElEd 4201f. Directed Student Teaching in Primary and Intermediate Grades. (HDiv: 10 cr; QP—3200; SP—4101, 4102, 4103, 4104, 4105, 4106; S-N only)
Students teach for a period of 11 weeks demonstrating application of approaches to teaching and learning in primary and intermediate grades under the guidance of a cooperating teacher and University supervisor.

ElEd 4202f. Directed Student Teaching in the Elementary School. (1-16 cr; prereq #; S-N only)
For students who need alternative or additional student teaching experience.
Division Structure and Course Descriptions

EIEd 4203s. Directed Student Teaching in Kindergarten. (3 cr; SP–3201, 4101, 4102, 4103, 4104, 4105, 4106; S-N only) Application of approaches to learning and teaching in a kindergarten classroom under the guidance of a cooperating teacher and University supervisor.

EIEd 4204s. Directed Student Teaching in International School. (IP; 10 cr; SP–4101, 4102, 4103, 4104, 4105, 4106; S-N only) Students teach for a period of 11 weeks demonstrating application of approaches to teaching and learning in primary and intermediate grades under the guidance of a cooperating teacher and University supervisor.

EIEd 4901s. The Teacher and Professional Development. (2 cr; OP–3300; SP–4201 or #) Professional development issues, including portfolio assessment.

EIEd 3993f,s, 4993f,s. Directed Study. (1-5 cr; repeatable; prereq #)

EIEd 4994f,s. Senior Honors Project. (1-5 cr; repeatable; prereq participation in Honors Program, #) A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

Education, Secondary (SeEd)

This discipline is in the Division of Education. The secondary education program leads to Minnesota licensure as a teacher of grades 7 through 12 in specified liberal arts disciplines. A separate admissions process must be completed and admission granted before students can enroll in courses in this program.

Currently UMM is approved to recommend teaching licensure for the following majors or fields: studio art, earth science (geology), English, French, German, life science (biology), mathematics, music, physical science (chemistry, physics), social science, Spanish, speech communication, speech-theatre, and theatre arts. Individuals interested in teaching should inquire at the Division of Education office for the current list of approved majors and minors at the time they select a teaching field.

Students planning to seek Minnesota teaching licensure at the secondary school level must complete the secondary teacher education program as well as requirements for teacher preparation listed under the discipline(s) of their majors(s) and minor(s).

Objectives—Coursework in secondary education is designed to meet standards of effective practice required for licensure and provide prospective teachers with opportunities to understand central concepts, tools of inquiry, and structures of disciplines taught in the secondary school; understand how children and adolescents learn and develop, individual and group motivation and behavior, and diversity among learners; create instructional opportunities adapted to learners from diverse cultural backgrounds and with exceptionalities; use instructional strategies that reflect personal knowledge of effective verbal, nonverbal, and communication techniques and encourage development of critical thinking, problem solving, and performance skills; understand and use formal and informal methods of student assessment; plan and manage instruction and engage in reflection and self-assessment; and collaborate with parents/guardians, families, school colleagues, and the community in an ethical manner.

Admission to the Program

During spring semester of the junior or senior year, students are expected to attend an application meeting to begin the application process. Enrollment in the program is limited. The decision to admit is made during spring semester, before fall registration. The secondary education course sequence begins in fall semester.

Students transferring from another school must be admitted to UMM before admission to the secondary program can be offered. It is recommended that students seek academic planning advice from a member of the secondary education faculty before the semester in which admission to the program is sought.

Requirements for admission include the following:

1. Successful completion of Psy 1061—Introduction to the Development of the Child and Adolescent and Ed 2101—Foundations and Issues in Education; (Psy 1051—Introduction to Psychology is strongly recommended)

2. Passing score on the Division of Education writing proficiency test or minimum passing score, as established for the State of Minnesota, on the examination of writing skills of the Preprofessional Skills Test (PPST)

3. Must have taken the PPST before enrolling in secondary education courses (date and location determined by Minnesota Board of Teaching; inquire at Student Counseling for details)

4. A minimum GPA of 2.50 overall, in required education courses, and in each teaching major or minor

5. Approximately 90 credits completed by the end of the junior year

6. Approval of the faculty based on an interview, recommendations, assessment of prior experience (especially with young people and other cultures), and progress toward a degree

7. Prior status as a student admitted to UMM
Student Teaching Requirements

1. Successful completion of SeEd 4101—Block I: Teaching the Secondary Student and SeEd 4102—Block II: Teaching and Learning Strategies
2. Successful completion of subject area methods courses(s)
3. Satisfactory completion of tutor aide and practicum experiences
4. Spch 1000—Variable Topics in Introduction to Public Speaking or Spch 1051—Introduction to Public Speaking or exemption granted by petition to the Division of Education based on satisfactory completion of at least a semester-length high school speech course
5. A minimum GPA of 2.50 overall, in required education courses, and in each teaching major and minor
6. Approval of teacher education faculty based on recommendations of discipline faculty

Secondary Licensure Requirements

Students planning to teach in Minnesota secondary schools must meet the licensure requirements of the Minnesota Board of Teaching (BOT), as well as the requirements for teacher preparation listed under their chosen major(s) or minor(s).

At the University of Minnesota, Morris, the following program is designed to meet the current BOT requirements. These course requirements are subject to change when the BOT implements new licensure rules.

2. A special methods course in each major and minor field in which teaching licensure is desired
3. Psy 1061—Introduction to the Development of the Child and Adolescent, and Psy 1081—Drugs and Human Behavior
4. Spch 1000—Variable Topics in Introduction to Public Speaking or Spch 1051—Introduction to Public Speaking or exemption granted by petition to the Division of Education based on satisfactory completion of at least a semester-length high school speech course
5. Human relations training that satisfies Minnesota Board of Teaching Rules, part 8700.2700
6. Senior Presentation: A reflective summary of the student as teacher presented to an audience of educators and peers following successful completion of student teaching
7. A minimum GPA of 2.50 overall, in required education courses, and in each teaching major(s) or minor(s)
8. All courses required for teaching licensure in secondary education (discipline major or minor, professional education, or other course) must be completed with a grade of C or higher
9. A passing score on the Minnesota Board of Teaching Preprofessional Skills Test (PPST)
10. A positive recommendation from the discipline and division offering the major or minor and from the Division of Education

Note: Students in secondary education must complete licensure requirements and apply for licensure within seven years from time of admission to the licensure program. After seven years, all education courses previously taken become void and must be retaken for licensure.

Required courses may not be taken S-N unless offered S-N only.

Course Descriptions

SeEd 4101f. Block I: Teaching the Secondary Student. (4 cr; QP—Ed 1000, Psy 1350; SP—¶4102, Ed 2101, Psy 1061, methods; prereq admission to the secondary teacher education program)
Study of the secondary education student, including exceptionalities, individual differences, learning styles, self-esteem, motivation, communication skills, and multicultural education.

SeEd 4102f. Block II: Teaching and Learning Strategies. (4 cr; SP—¶4101, methods)
Teaching and learning strategies for secondary classrooms. Planning for instruction, learning theory, use of technology in the classroom, educational philosophy, discipline, and assessment. In addition to class sessions, students complete 90 hours of preprofessional field experience in the schools.

SeEd 4201s. Directed Student Teaching in the Secondary School. (1-16 cr; prereq #; S-N only)
For students who need alternative or additional student teaching experience.

SeEd 4202f,s. Directed Student Teaching in the Secondary School. (1-16 cr; prereq #; S-N only)
For students in secondary education must complete licensure requirements and apply for licensure within seven years from time of admission to the licensure program. After seven years, all education courses previously taken become void and must be retaken for licensure.

SeEd 3993f,s, 4993f,s. Directed Study. (1-5 cr; repeatable; prereq #)
Professional development issues, including portfolio assessment.
SeEd 4994f,s. Senior Honors Project. (1-5 cr; repeatable; prereq participation in Honors Program, #)
A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

Secondary Education Methods Courses
These courses focus on the objectives, curricula, special methods, materials, and evaluation appropriate for teaching the various subject matter areas in the secondary school. Students are expected to complete a methods course in both their major and minor fields. The prerequisites for each course are a major or minor in the discipline and admission to the secondary education program. The methods course is taken concurrently with the secondary education block courses and must be successfully completed before student teaching in a specific field.

ArtE 4103f. Methods of Teaching Art K-12. (3 cr)
LanE 4103f. Methods of Teaching Foreign Language in the Secondary School. (3 cr)
MthE 4103f. Methods of Teaching Mathematics in the Secondary School. (3 cr)
MusE 4103f. Methods of Teaching Music K-12. (3 cr)
MusE 4104f. Multicultural Music for the K-12 Music Educator. (1 cr; prereq #)
SciE 4103f. Methods of Teaching Science in the Secondary School. (3 cr)
SSCE 4103f. Methods of Teaching Social Science in the Secondary School. (3 cr)
SThE 4103f. Methods of Teaching Speech and Theatre Arts in the Secondary School. (3 cr)

English (Engl)
This discipline is in the Division of the Humanities. The ideal student of English combines intellectual rigor with insight and sensitivity, uniting those qualities in effective criticism. The courses at UMM aim to foster these qualities in a wide variety of intellectually challenging ways.

Objectives—At UMM, students have the opportunity to examine different periods of literature from the medieval to the present and to take courses in expository and creative writing. They also are able to look in more detail at specific periods, authors, genres, criticism, and theory. Students learn how to discuss methodically and imaginatively what they have read: how the author has structured the text and how literary language achieves its effects and directs the reader’s response to the text. English courses involve learning to write effectively about literature, to analyze carefully, and to construct coherent arguments.

Major Requirements include a minimum of 10 courses (40 credits).

Prerequisite course:
Engl 2011—Analysis of Poetry and Poetic Language

Advanced courses:
A. At least two courses in British literature from:
Engl 3101—Medieval to Renaissance in English Literature
Engl 3111—British Romanticism: Origins and Influences
Engl 3121—Victorian and Modern British Literature
B. At least one course in American literature from:
Engl 3201—The Pluralistic Roots of U.S. Literature
Engl 3211—New Visions of U.S. Literature
C. At least one course from:
Engl 3301—Multicultural Literature
Engl 3311—Native American Literature
Engl 3321—Women’s Literature
Electives: Five courses, three at the 3xxx or 4xxx level

Minor Requirements include a minimum of six courses (24 credits).

Prerequisite course:
Engl 2011—Analysis of Poetry and Poetic Language

Advanced courses:
A. At least one course in British literature from:
Engl 3101—Medieval to Renaissance in English Literature
Engl 3111—British Romanticism: Origins and Influences
Engl 3121—Victorian and Modern British Literature
B. At least one course in American literature from:
Engl 3201—The Pluralistic Roots of U.S. Literature
Engl 3211—New Visions of U.S. Literature
C. At least one course from:
Engl 3301—Multicultural Literature
Engl 3311—Native American Literature
Engl 3321—Women’s Literature
Electives: Two courses, one at the 3xxx or 4xxx level

Teacher Preparation Requirements
Engl 2011—Analysis of Poetry and Poetic Language
Engl 3001—Advanced Expository Writing
Engl 3021—Grammar and Language
Engl 3031—Shakespeare
Engl 3301—Multicultural Literature

**Two courses from historical perspectives—**

**one British:**
- Engl 3101—Medieval to Renaissance in English Literature
- Engl 3111—British Romanticism: Origins and Influences
- Engl 3121—Victorian and Modern British Literature

**one American:**
- Engl 3201—The Pluralistic Roots of U.S. Literature
- Engl 3211—New Visions of U.S. Literature

**Electives:** Three courses, one at the 3xxx or 4xxx level

**Two courses in speech:**
- Spch 2101—Introduction to Speech Communication
- Spch 3301—Media Theory, Criticism, and Problems

Professional education courses as required

**Course Descriptions**

**Engl 1001f. Fundamentals of Writing.** (4 cr; may not be used to fulfill the College Writing requirement)
- Intensive practice in the fundamentals of writing. Students learn and apply strategies for generating, organizing, revising, and editing their writing.

**Engl 1011f,s, College Writing.** (CW; 4 cr)
- Practice in expressive and analytical writing, with special emphasis on the multisource essay.

**Engl 1021s. Introduction to Creative Writing.** (ArtP; 4 cr; prereq #; not offered 1999-2000)
- An introduction to the basic elements of creative writing, including exploration of poetry, story, and journal writing. Practice with techniques such as dialogue, description, voice, and style.

**Engl 1031s. Imagining Contemporary America.** (HDiv; 4 cr; not offered 2000-2001)
- Examination of selected recent literary works reflecting the diversity of U.S. culture.

**Engl 1100. Variable Topics in Literature.** (See specific topics for general education categories; 4 cr; repeatable when topic changes; offered when feasible)
- Study of a literary topic that is both timely and of broad interest.

**Engl 1101f. The Novel Since 1960.** (Hum; 4 cr; not offered 1999-2000)
- Major British and American novels since 1960.

**Engl 1102. The Environmental Imagination.** (Env't; 4 cr; not offered 1999-2000)
- Study of selected poetry and prose on nature and the environment.

**Engl 1103. The Novel on Page and Screen.** (Hum; 4 cr; offered when feasible)
- Text and film versions of major British and American novels will be studied to learn about the effects of adaptation and the distinctive characteristics of the two media.

**Engl 1104. Backgrounds to Literature.** (Hist; 4 cr; offered when feasible)
- Wide reading in the Bible and versions of the Greek and Roman myths combined with selected readings in English literature that illustrate the literary use of biblical and classical allusions.

**Engl 2101f,s. Analysis of Poetry and Poetic Language.** (4 cr; SP–1011 or equiv)
- Introduction to the English major, concentrating on poetry. Emphasis on appreciating and understanding poetic form and technique. Includes one play by Shakespeare.

**Engl 2102s. Analysis of Drama and Short Fiction.** (Hum; 4 cr; SP–1011 or equiv; not offered 2000-2001)
- Study of dramatic literature and fiction with emphasis on developing an understanding and appreciation for the forms of narrative fiction and drama and the techniques appropriate to each.

**Engl 2109. Variable Topics in Writing.** (ArtP; 4 cr; repeatable when topic changes; QP–1302 or 1302H; SP–1011 or equiv; offered when feasible)
- Study of a topic or method(s) of writing not normally covered by other writing courses.

**Engl 2101f. Journal Writing.** (ArtP; 4 cr; QP–1302 or 1302H; SP–1011 or equiv; not offered 1999-2000)
- Exploring the genre of journal writing; includes reading of published journals and keeping a journal.

**Engl 3001f,s. Advanced Expository Writing.** (4 cr; prereq #; not offered fall 2000)
- Formal training in expository writing, with special attention to the ways that context and audience affect writers’ stylistic choices.

**Engl 3011s. Advanced Creative Writing.** (ArtP; 4 cr; prereq #; not offered 2000-2001)
- For experienced writers. Focus on developing skills and mastering creative and technical elements of writing poetry and fiction.

**Engl 3021f. Grammar and Language.** (4 cr)
- Study of prescriptive and descriptive grammars and their application to writing: theories of grammar; nature of language; including phonology, syntax, semantics, language acquisition, and language variation and change.

**Engl 3031s. Shakespeare.** (Hum; 4 cr; QP–1501; SP–2011)
- A careful reading of a representative selection of Shakespeare’s plays, with attention to their historical context, the poetic and dramatic aspects of Shakespeare’s art, and a variety of approaches to his work.

**Engl 3050f. Variable Topics in Literature and Language I.** (4 cr; repeatable when topic changes; QP–1501; SP–2011)
- Detailed investigation of the works of certain authors or an intensive investigation of a particular period.

**Engl 3101f. Medieval to Renaissance in English Literature.** (4 cr; QP–1501, 1531, 1541; SP–2011)
- Readings in English poetry, prose, and/or drama from 1300 to 1600, with particular attention to the development of an English national literature and the challenges posed by periodization (i.e., “Medieval” and “Renaissance”). Specific authors vary.

**Engl 3111s. British Romanticism: Origins and Influence.** (4 cr; QP–1501, 1531, 1541; SP–2011)
- The study of Romanticism as an historical movement in English literature—its origins in reaction to 18th-century neoclassicism and its influences on subsequent literature.
Division Structure and Course Descriptions

Engl 3121s. Victorian and Modern British Literature. (4 cr; QP–1501, 1531, 1541; SP–2011)
Analysis of literature as a product and cause of cultural change in Great Britain from 1839 to 1939.

Study of the development of the English novel in the 18th and 19th centuries.

Engl 3141f. Irish Literature From 18th Century to the Present. (4 cr; QP–1501; SP–2011; not offered 2000-2001)
Readings in Irish literature and its relationship to historical contexts.

Engl 3201f. The Pluralistic Roots of U.S. Literature. (4 cr; QP–1501, 1531, 1541; SP–2011)
Study of important texts, canonical and non-canonical, and important periods and movements that define the colonial and U.S. experience up to 1870.

Engl 3211s. New Visions of U.S. Literature. (4 cr; QP–1501, 1531, 1541; SP–2011)
Study of selected historical and literary texts in order to explain the emergence of distinctively modern conceptions of U.S. literature from 1870 to the present.

Study of the development of the American novel in the 19th and 20th centuries.

Comparative examination of literature by African American, Native American, Chicano/a, and Asian American writers.

Development of Native American literature from the 19th century to the present. Emphasis will be placed on cultural and historical contexts informing this literature as well as concerns of orality, community, and identity.

Engl 3321s. Women's Literature. (4 cr; QP–1501, 1531, 1541; SP–2011)
Examination of women writers as a distinct group, with attention to ethnic, class, and cultural differences, includes readings in feminist theory.

Study of important movements and figures in 20th-century poetry from 1900 to the present.

Engl 4000f,s. Variable Topics in Literature and Language II. (4 cr; repeatable when topic changes; QP–1501; SP–2011, #)
In-depth study of a literary subject conducted as a seminar with student presentations of oral and written reports. Attention will be given to literary research and writing. Topics will be announced in advance.

The development of modernism in British fiction in such writers as Conrad, Woolf, Forster, and Lawrence.

This seminar will use extensive readings in Spenser's *The Faerie Queen* and Milton's *Paradise Lost*, as well as selected minor works, to explore in detail the thought, culture, and history of the English Renaissance.

The development of Herman Melville’s fictional prose and poetry.

Engl 1993f,s, 2993f,s, 3993f,s, 4993f,s. Directed Study. (1-5 cr; repeatable; prereq #)

Engl 4994f,s, Senior Honors Project. (1-5 cr; repeatable; prereq participation in Honors Program, #)
A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

**European Studies (ES)**

This is an interdisciplinary major under the authority of the vice chancellor for academic affairs and dean. The program is administered by the coordinator of European studies.

**Objectives**—The purpose of the European studies program is to acquaint students with the culture and society of Europe from the Middle Ages to the present as well as Europe’s classical antecedents. The study of modern Europe reflects recent changes in Central/Eastern Europe and Russia. The approach is interdisciplinary, drawing on various fields of study.

**Major Requirements** include language proficiency in French, German, or Spanish equivalent to that required for the completion of the course numbered 2002 in the language. (Students planning to pursue advanced courses in French, German, or Spanish should note that proficiency beyond the 2002 level is sometimes a prerequisite to some of the courses listed below.) Equivalent proficiency in European languages not offered at UMM may also be used to satisfy this requirement.

In addition, 48 credits must be selected from the courses listed below, with a maximum of 16 of the credits in any one discipline.

1. Students develop a coherent program and a plan of study in consultation with their major advisers. Advisers normally are faculty with a specialty in an appropriate area. Upon approval by the advisers, the program and plan are forwarded to the vice chancellor for academic affairs for information.

2. Any directed study course for which an instructor is available is acceptable provided the subject matter is appropriate.

3. The topics courses listed below as well as topics and seminar courses in other disciplines are acceptable provided the subject matter is appropriate.

4. Students are encouraged to spend a period of time in Europe pursuing conventional coursework, independent studies, or other study abroad programs.
Note: Students planning to major in European studies must register with the vice chancellor for academic affairs and dean.

Course Descriptions

Arth 1121. Renaissance to Modern Art. (FA; 4 cr)
Survey of the major works of art of western Europe from 1400 to the present.

Arth 3201f. 19th-Century European Art through Post-Impressionism. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or #; not offered 2000)
Survey of major movements from Neoclassicism through Romanticism, Realism, and Impressionism to Post-Impressionism. Attention is given to iconographical and formal analysis as well as to the social conditions in which artists lived and worked.

Arth 3211s. Early Modern Art: Symbolism to Surrealism. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or #; not offered 2001)
Survey of the major early modern movements from Symbolism through Cubism, Futurism, Expressionism, Constructivism, De Stijl, and the Bauhaus to Surrealism. Attention is given to theories of modern art as well as to formal and iconographical analyses and to the social conditions in which modern art was created and experienced.

Arth 3221f. 20th-Century Art: 1945 to the Present. (FA; 4 cr; QP–1100 or 1201 or 1202 or jr; SP–1101 or 1111 or 1121 or #; not offered 1999-2000)
An examination of selected artists and movements from the 1940s through the present. Equal emphasis is given to the art and the social context in which it was made and experienced, and to modernist and postmodernist aesthetic and critical thought.

Econ 4121s. International Trade Theory. (SS; 2 cr; QP–3101; SP–3201 or #; not offered 1999-2000)
Overview of why trade occurs, pattern of trade and international factor movement. Effect of trade and trade policy on the economy. Current topics in trade theory.

Engl 1100. Variable Topics in Literature. (See specific topics for general education categories; 4 cr; repeatable when topic changes; offered when feasible)
Study of a literary topic that is both timely and of broad interest.

Study of the development of the English novel in the 18th and 19th centuries.

Fren 3011s. Reading and Analysis of Texts. (Hum; 4 cr; QP–1120 or #; SP–2002 or equiv or #)
Introduction to representative literary works of France and the French-speaking world. Development of ease in reading French; introduction to methods for analyzing its style and meanings.

Fren 3021f. Contemporary France. (IP; 4 cr; QP–1120 or #; SP–2002 or #; not offered 1999-2000)
A study of the evolution of French culture from 1870 to the present as France developed into a modern, multicultural democracy.

Fren 3041s. French Cultural Heritage in Other Lands. (IP; 4 cr; QP–1120; SP–2002 or #; not offered 1999-2000)
Readings in a variety of cultural and literary texts from among French-language writers of Africa, the Caribbean, North America, and Europe; study of issues of national identity, race, gender, and postcolonial consciousness.

A survey of French literature from the Middle Ages to the Enlightenment; a study of the successive ideals of feudalism, Renaissance knowledge and lyricism, classical reason and unreason, and the “Rights of Man.”

Fren 3052f. French Literature II: Revolution, Romanticism, Modernity. (Hum; 4 cr; QP–3300; SP–3011; not offered 2000-2001)
A survey of French literature from the Enlightenment to the present: literature as the rewriting of the past and the discovery of the creative self.

Fren 4991. Independent Study in French Abroad. (IP; 4 cr; repeatable to 12 cr; QP–3241 and # for study in France, 3243 and # for study in other French-speaking cultures; SP–3021 and # for study in France, 3041 and # for study in other French-speaking cultures)

Ger 3102f. Survey of German Literature and Culture II. (Hum; 4 cr; QP–3105 or #; SP–3011 or #)
Chronological study of German literature and its cultural background from 1830 to 1920. Selected representative works by Stifter, Buechner, Hebbel, Keller, Storm, Hauptmann, and Kaiser are read and analyzed.

Ger 3201s. German Classicism. (Hum; 4 cr; QP–3200, 3201 or #; SP–3101, 3102 or #; not offered 2000-2001)
Readings in aesthetic theory and exemplary works by writers of the period. Texts by Goethe and Schiller are read and analyzed in conjunction with opera librettos based on their works. Videos of Donizetti’s Mary Stuart and Verdi’s Don Carlo.

Ger 3211s. German Romanticism. (Hum; 4 cr; QP–3200, 3201 or #; SP–3101, 3102 or #; not offered 1999-2000)
Readings in Romantic theory and works by important authors of the period: Wackenroder, Tieck, Novalis, Eichendorff, and E.T.A. Hoffmann. Other art forms, such as music and painting supplement the literary discussions.

Ger 3300fs. Variable Topics in German With English Discussion. (IP; 4 cr; repeatable when topic changes; open to all students; does not count toward major or minor)
Topics may be an in-depth study of one author or a specific period in German literature. Seminar discussions based on individual research. Readings and discussions are in English.

Ger 3601f. Studies in German Literature. (Hum; 4 cr; QP–3105 or #; SP–3011, #; not offered 1999-2000)
Selected readings in German reflecting modern literary trends. The course examines the cultural politics in the evolution of the literature in the formerly divided Germany, using plays, novels, biography, and documentary reports. It deals with questions of literary theory, history, and sociopolitical structures.

Hist 3000. Variable Topics in History. (Hist; 4 cr; repeatable when topic changes; offered when feasible)
Study of a historical topic that transcends the traditional chronological or geographical categories. Possible topics include the history of historical writing, science, and Christianity.
Division Structure and Course Descriptions

Hist 3100f. Variable Topics in European History I. (Hist; 4 cr; repeatable when topic changes) Political, social, intellectual, or economic history of Europe from the end of the Middle Ages to 1750. Possible topics include the Renaissance, the Reformation, royal absolutism, and the scientific revolution.

Hist 3150f. Variable Topics in European History II. (Hist; 4 cr; repeatable when topic changes) Political, social, intellectual, or economic history of Europe from 1750 to the present. Possible topics include the fascist era, development of nationalism, World War I, World War II, and the era of the French Revolution and Napoleon.

Hist 3200f. Variable Topics in European National History. (Hist; 4 cr; repeatable when topic changes) Political, social, intellectual, or economic history of selected European nations. Possible topics include Tudor and Stuart England, the English Civil War, modern Britain, modern France, imperial Russia, and Soviet Russia.

Hum 1000. Variable Topics. (See specific topics for general education categories; 4 cr; repeatable when topic changes; offered when feasible) Opportunity to study a traditional literary or narrative form or an idea as it appears in a number of cultures. Topic to be announced.

Hum 1100. Variable Topics in Western World Literature. (See specific topics for general education categories; 4 cr; repeatable when topic changes; offered when feasible) Emphasis on continental works in a single genre (e.g., the novel) or from a single international literary movement (e.g., romanticism or symbolism). Topic to be announced.

Hum 1300. Variable Topics in French Literature and Culture. (See specific topics for general education categories; 4 cr; repeatable when topic changes) This course will be taught on a variety of topics such as modern French literature in translation and women authors in French. It will be offered as both a regular course and an honors course. Topic to be announced.

Hum 1451s. German Literature in Film. (IP; 4 cr; does not count toward German major or minor; not offered 2000-2001) Development of the German film as expressionistic art form. Film as text, film as history, film as aesthetic expression. Film presentations are in German but with English subtitles in most cases. Readings and lectures are in English.

Mus 1041f.s. Introduction to Music. (FA; 4 cr) Survey emphasizing development of an intelligent understanding and appreciation of music. For non-music majors.

Mus 3101f. Core Studies III: Medieval, Renaissance, and Baroque Music. (FA; 4 cr; QP–1123; SP–1102) Historical development of Western music and representative literature of the various periods and styles.

Pol 1401f. World Politics. (IP; 4 cr) The contemporary international system, including nationalism, international political economy, foreign policy formulation, and global concerns such as the environment and conflict. North/South debate, definitions of power, the new world order, regional vs. global conflicts, and avenues of cooperation.

Pol 3301f. Contemporary Political Ideologies. (Hum; 4 cr; QP–1100; SP–1101 or & #; not offered 2000-2001) Major currents of political theory from Marx to present: Marxism, socialism, syndicalism, anarchism, fascism, political ideologies of antidemocratic thought, and totalitarian regimes.

Pol 3352s. Variable Topics in Western Political Thought: Modern. (Hum; 4 cr; QP–1100; SP–1101 or #) Machiavelli; theories during the Renaissance, Reformation, and Counter-Reformation. Early modern absolutism, the emergence of modern contract theory, constitutionalism, liberalism, and utopianism.


Pol 3452s. Variable Topics in International Relations: International Relations Theory. (IP; 4 cr; QP–1400; SP–1401 or & #; not offered 1999-2000) Theory and practice of contemporary international relations. Realism and idealism, national power, systems theory, integration theory, war and peace, conflict resolution, and the world government.

Pol 3500s. Variable Topics in Comparative Politics. (See specific topics for general education categories; 4 cr; repeatable when topic changes; QP–1100; SP–1101 or #) In-depth analysis of major government systems from regions of the world other than Europe or issues in comparative public policy, e.g., comparing social welfare budgetary priority across nation-states.

Pol 3502s. Government and Politics of Europe. (SS; 4 cr; QP–1100; SP–1101 or #; not offered 2000-2001) Analysis of major government systems of Europe, including Great Britain, the former Soviet Union or Commonwealth of Independent States, and Eastern Europe, France, and Germany, with emphasis on how different institutions, structure, and culture result in different types of public policy.

Span 3201f. Masterpieces of Spanish Peninsular Literature I. (Hum; 4 cr; QP–3 qtrs advanced Span, 1 qtr 3101; SP–3001, 3002, 3101) Masterpieces from the Generation of 1898 and the Contemporary Period. Students should demonstrate the ability to analyze literary texts, using the text as well as the aesthetic, political, historical, and philosophical context in which the work was produced. Students must also demonstrate the ability to discuss in class the ideas of the texts and the context, and they must write papers with grammatical precision and rigorous research.

Span 3202s. Masterpieces of Spanish Peninsular Literature II. (Hum; 4 cr; QP–3 qtrs advanced Span, 1 qtr 3101; SP–3201) Masterpieces from Medieval, Renaissance, Golden Age, 18th century, and 19th century. Students should demonstrate the ability to analyze literary texts, using the text as well as the aesthetic, political, historical, and philosophical context in which the work was produced.
Students must also demonstrate the ability to discuss in class the ideas of the texts and the context, and they must write papers with grammatical precision and rigorous research.

**Span 3500f. Variable Topics in Spanish Peninsular Literature.** (Hum; 4 cr; repeatable when topic changes; QP–3 qtrs advanced Span, 1 qtr 3101; SP–3002, 3101)
Topic to be announced. Students should demonstrate the ability to analyze literary texts, using the text as well as aesthetic, political, historical, and philosophical context in which the work was produced. Students must also demonstrate the ability to discuss in class the ideas of the texts and the context, and they must write papers with grammatical precision and rigorous research.

**Spch 3411f. Intercultural Communication Theory and Research.** (HDiv; 4 cr; QP–1101 or #; SP–2101 or #)
Study of intercultural communication from an interpersonal and group perspective. Includes qualitative and quantitative methods.

**Th 3000f. Variable Topics in Theatre Arts.** (1-4 cr; repeatable when topic changes; prereq #: offered when feasible)
Varying topics relating to theatre that are not ordinarily included in other theatre arts courses.

**Th 3102s. World Theatre: History and Literature II.** (Hist; 4 cr; QP–1500, 3500; SP–1101, 3101)
Theatrical practice and dramatic literature from the late 17th century to the present, examining select Asian, African, and/or Western Hemisphere theatrical practice, as well as tracing the roots leading to, and influences on, current world theatre practice and dramatic literature.

### Foreign Languages and Literatures

(See French [Fren], German [Ger], Russian [Russ], and Spanish [Span].)
UMM offers majors and minors in French, German, and Spanish. Some beginning courses in Russian also are offered. Study of foreign languages, culture, and literature may be undertaken for its own sake as part of a traditional liberal education. It is useful as well for preparation for teaching, graduate or professional work, and business careers.

### French (Fren)

This discipline is in the Division of the Humanities. The French discipline gives students the language and analytic skills necessary to participate in the cultural life and appreciate the literary heritage of France and francophone countries throughout the world. French is an important language of diplomacy, commerce, health care, and research in many disciplines, such as music, art, linguistics, history, law, political science, anthropology, and philosophy.

#### Objectives—
The French discipline is designed to teach skills necessary for communicating with a variety of French-speaking peoples and to introduce their rich cultures, including their ideas, institutions, and writings, past and present. It invites students to look at the impact these cultures have had on Western civilization and to examine all of them critically.

#### Major Requirements
Fren 2001—Intermediate French I
Fren 2002—Intermediate French II
Fren 3001—Conversation and Composition
Fren 3011—Reading and Analysis of Texts
Fren 3021—Contemporary France

Courses with grades of D may not be used to meet the major requirements. Courses offered in English do not count toward the major. Students may count Fren 4991—Independent Study in French Abroad toward the major.

#### Minor Requirements
Fren 2001—Intermediate French I
Fren 2002—Intermediate French II
Fren 3001—Conversation and Composition
Fren 3011—Reading and Analysis of Texts
Fren 3021—Contemporary France

Students may count Fren 4991—Independent Study in French Abroad toward the major.

#### Teacher Preparation Requirements
French majors must complete:
the required professional education courses, including methods (LanE 4103—Methods of Teaching Foreign Language in the Secondary School)
student teaching
the proficiency examination in French

Students may count Fren 4991—Independent Study in French Abroad toward the major.

French minors must complete:
Fren 2001—Intermediate French I
Fren 2002—Intermediate French II
Fren 3001—Conversation and Composition
Fren 3011—Reading and Analysis of Texts
Fren 3021—Contemporary France

8 additional credits from Fren courses at the 3xxx level or above

#### Course Descriptions

**Fren 1001f. Beginning French I.** (FL; 4 cr)
An introduction to oral and written French, its basic structure, and to French culture.

**Fren 1002s. Beginning French II.** (FL; 4 cr; QP–1100 or placement or #; SP–1001 or placement or #)
Continuation of 1001.
Division Structure and Course Descriptions

Fren 2001f. Intermediate French I. (IP; 4 cr; QP–1102 or placement or #; SP–1002 or placement of #) Review of the essential structural patterns of the French language; continued development of oral, aural, reading, and writing skills based on cultural and literary texts appropriate to this level.

Fren 2002s. Intermediate French II. (IP; 4 cr; QP–1110 or placement or #; SP–2001 or placement or #) Review of the essential structural patterns of the French language; continued development of oral, aural, reading, and writing skills based on cultural and literary texts appropriate to this level.

Fren 3001f. Conversation and Composition. (IP; 4 cr; QP–1120 or placement or #; SP–2002 or placement or #) Conversation, including work on sounds and sound patterns as well as vocabulary building and practice based on common situations; writing skills; and advanced grammar review.

Fren 3011s. Reading and Analysis of Texts. (Hum; 4 cr; QP–1120 or #; SP–2002 or equiv or #) Introduction to representative literary works of France and the French-speaking world. Development of ease in reading French; introduction to methods for analyzing its style and meanings.

Fren 3021f. Contemporary France. (IP; 4 cr; QP–1120 or #; SP–2002 or #; not offered 1999-2000) A study of the evolution of French culture from 1870 to the present as France developed into a modern, multicultural democracy.

Fren 3031f. Backgrounds to Modern France. (Hist; 4 cr; QP–1120 or #; SP–2002 or #; not offered 2000-2001) This course traces the history of French culture from the Middle Ages until 1870; it examines the geography, language, and institutions of medieval and early modern France.

Fren 3041s. French Cultural Heritage in Other Lands. (IP; 4 cr; QP–1120; SP–2002 or #; not offered 1999-2000) Readings in a variety of cultural and literary texts from among French-language writers of Africa, the Caribbean, North America, and Europe; study of issues of national identity, race, gender, and postcolonial consciousness.


Fren 4011s. Creative Writing and Translation. (Hum; 4 cr; QP–1120; SP–2002 or equiv or #; not offered 1999-2000) Written French styles from the inside out. How to create effects in French; how to convey in French those you read in English. Work on texts by well-known French and English authors and, especially, your own original work.


Fren 4100s. Variable Topics in French. (Hum; 4 cr; repeatable when topic changes; QP–3300; SP–2002 or equiv or #; not offered 1999-2000) Topics in the language, culture, or literature of France or other French-speaking peoples. Topics to be announced.

Fren 4200f. French Practicum. (1 cr; repeatable to 4 cr; prereq #) The practical application of the four skills of speaking, listening, reading, and writing in French through a series of projects.

Fren 4210. French Culture on Computer. (Hum; 2-6 cr; repeatable to 6 cr; prereq #; offered when feasible) An independent in-depth study via computer of a particular period of French culture, including the historical, political, art, architecture, social life, education, and literature, from the Middle Ages to the 20th century.

Fren 4991. Independent Study in French Abroad. (IP; 4 cr; repeatable to 12 cr; QP–3241 and # for study in France, 3243 and # for study in other French-speaking countries; SP–3021 and # for study in France, 3041 and # for study in other French-speaking cultures)

Fren 1993f,s, 2993f,s, 3993f,s, 4993f,s. Directed Study. (1-5 cr; repeatable; prereq #)

Fren 1994f,s, Senior Honors Project. (1-5 cr; repeatable; prereq participation in Honors Program, #) A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

Geography (Geog)

This discipline is in the Division of the Social Sciences.

Objectives—Geography courses focus on basic concepts of the field and deal with both societal relationships and the physical environment. Either Geog 1001 or 3111 satisfies the geography requirement for students seeking secondary school teaching licensure in the social sciences.

Course Descriptions

Geog 1001s. Problems in Geography. (Envt; 4 cr; offered when feasible) Basic concepts and questions of geography. The terminology of geography; some modern trends in geography; interpretation of geographical data; select problems of human, physical, economic, and cultural geography.

Geog 3111. Geography of Minnesota. (Envt; 4 cr; prereq #; offered when feasible) The changing geography of Minnesota and the upper Midwest. Legacy from the railroad era, transformation into the auto-air age, the emerging future.
Geology (Geol)

This discipline is in the Division of Science and Mathematics. Geology currently offers courses that satisfy a variety of requirements as well as a curriculum leading to a bachelor of arts degree in geology.

Objectives—The geology curriculum serves those interested in a broader knowledge of their natural environment and the geological sciences as part of their liberal arts education; provides a firm foundation in geology, related sciences, and mathematics for students interested in the investigation and solution of geologic problems; prepares students for graduate study in the geosciences and related areas; provides the necessary background in earth science for those who plan to teach in this field at the secondary level; and serves those in other professional or interdisciplinary programs who need geology as a related subject.

Major Requirements

Geol 1101—Physical Geology
Geol 2101—Mineralogy and Crystallography
Geol 2111—Petrology and Petrography
Geol 3196—Geology Field Camp
Geol 4901—Geology Senior Seminar
Geol 4902—Geology Senior Seminar Presentations
20 additional credits in Geol courses at the 2xxx level or above

Chem 1101-1102—General Chemistry I-II
or Chem 1111-1112—Honors General Chemistry I-II
Math 1101—Calculus I
a minimum of 7 credits, chosen through consultation with a geology adviser, from appropriate natural science, biology, computer science, physics, chemistry, or mathematics courses

Up to 8 credits of coursework with a grade of D may be used to meet the major requirements if offset by an equivalent number of credits of A or B.

Graduate studies in the geological sciences:

Geol 1121—Historical Geology: Earth History and Changing Scientific Perspectives
Geol 2121—Sedimentology and Stratigraphy
Geol 3101—Structural Geology
Math 1102—Calculus II
CSci 1301—Problem Solving and Algorithm Development I
Phys 1101—General Physics I
are necessary for students planning to pursue graduate studies in the geological sciences.

Minor Requirements

Geol 1101—Physical Geology
Geol 2101—Mineralogy and Crystallography
Geol 2111—Petrology and Petrography

Chem 1101-1102—General Chemistry I-II
12 additional credits in Geol courses numbered 1121 or above; a maximum of 3 credits of directed study may be used to satisfy elective requirements

Up to 8 credits of coursework with a grade of D may be used to meet the minor requirements if offset by an equivalent number of credits of A or B.

Teacher Preparation Requirements

Students interested in secondary teaching in earth science must complete a program of coursework that includes:

professional education courses (described under Education, Secondary)

geology courses (described below)

the following science core courses:

Biol 1101—Biological Principles
Biol 2101—Evolution of Biodiversity
Chem 1101-1102—General Chemistry I-II
Geol 1101—Physical Geology
Geol 1121—Historical Geology: Earth History and Changing Scientific Perspectives
Phys 1101—General Physics I

In addition, students must complete:

Geol 2101—Mineralogy and Crystallography
Geol 2111—Petrology and Petrography
20 additional elective credits in geology

The teaching minor in earth science requires:

the professional education sequence

science core courses listed above

Geol 2101—Mineralogy and Crystallography
12 additional credits in geology

Consultation with an adviser in geology and early completion of the basic science core courses are recommended.

Required courses may not be taken S-N unless offered S-N only.

Course Descriptions

Geol 1001s. Environmental Geology: Geology in Daily Life. (Sci; 4 cr; may not count toward geol major or minor)
Effects of volcanoes, earthquakes, and floods on humans and civilization; geologic problems associated with rural and urban building, waste management, and waste disposal; the importance of geologic knowledge in the discovery of fossil fuels and mineral resources. (4 hrs lect)

Geol 1011f. Geology of the National Parks. (Sci; 4 cr; may not count toward geol major or minor)
Exploration of the fundamental aspects of the geosciences: earth materials, geologic time, plate tectonics, and the evolution of landscapes by examining the geology and geologic history of the U.S. national parks. (4 hrs lect)
Geol 1101f,s. Physical Geology. (Sci-L; 4 cr)
Introduction to the materials that make up the Earth and the structures, surface features, and geologic processes involved in its origin and development. Lab work includes study of the major constituents of the Earth’s crust, including the important rocks and minerals; study of surface and geologic features using aerial photographs, topographic maps, and satellite imagery. (3 hrs lect, 3 hrs lab)

Geol 1111f. Honors Physical Geology. (Sci-L; 4 cr; prereq # for students not in Honors Program; not offered 2000-2001)
Introduction to planet Earth and the surface features, structures, and physical and chemical processes involved in its origin and development. Lab work focuses on study of the major constituents of the Earth’s crust, including the important rocks and minerals; study and interpretation of surface and geologic features using aerial photographs, topographic maps, and satellite imagery; modeling, analysis, and interpretation of geological processes and data. (3 hrs lect, 3 hrs lab and discussion, 1-day field trip)

Geol 1121s. Historical Geology: Earth History and Changing Scientific Perspectives. (Sci-L; 4 cr)
Development of fundamental theories and principles of geology, including stratigraphy, uniformitarianism, geologic time, evolution, and plate tectonics. Emphasis on how geological thought has evolved through time as the scientific, religious, and political climate has changed. Discussion of the Earth’s history and science’s changing views of the Earth; continental movements, mountain building, and the evolution and development of organisms and ecosystems. Lab experience on methods of interpreting Earth’s history from rocks, fossils, and structures and solving geological problems. (3 hrs lect, 3 hrs lab)

Geol 2101f. Mineralogy and Crystallography. (Sci-L; 4 cr; QP–1100, Chem 1501, SP–1101 or 1111, Chem 1101 or #)
Classification, identification, physical and chemical properties, origin and natural occurrence of major mineral groups. Lab study of crystal systems by use of models; introduction to optical aspects and physical and chemical testing. (3 hrs lect, 6 hrs lab and field trips)

Geol 2111s. Petrology and Petrography. (Sci-L; 4 cr; QP–3200; SP–2101)
Classification, composition, genesis, and natural occurrence of igneous, sedimentary, and metamorphic rocks; lab study and identification of rocks by various macroscopic, microscopic, and chemical means. (3 hrs lect, 6 hrs lab and field trips)

Geol 2121f. Sedimentology and Stratigraphy. (Sci-L; 4 cr; QP–3200; SP–2101)
Processes of sedimentation, including origin, transportation, and deposition of sediments; interpretation of sedimentary environments. Principles of stratigraphy and their applications. Correlation problems; use and construction of thickness and facies maps and cross sections; interpretation of ancient sedimentary environments based on stratified sequences of rocks. (3 hrs lect, 3 hrs lab and field trips)

Geol 2131f. Geomorphology. (Sci; 4 cr; QP–1120; SP–1101 or 1111; not offered 1999-2000)
Study of the Earth’s surface and surficial processes; weathering, erosion, and deposition, and the resulting landforms and products; the history of the study of landforms in the United States. (3 hrs lect, 3 hrs lab and field trips)

Geol 2141f. Glacial and Quaternary Geology. (Sci; 4 cr; QP–1120; SP–1101 or 1111; not offered 2000-2001)
Glaciers, glaciology, glacial deposition, glacial erosion; climatic change and the growth and advance of ice sheets; effect of glaciations on flora and fauna. (3 hrs lect, 3 hrs lab and field trips)

Geol 3000f,s. Variable Advanced Topics in Geology. (Sci; 4 cr; repeatable when topic changes; prereq #)
Lecture or lab and lecture and lab treatment of topics not included in the regular curriculum. Possible topics include economic geology and global tectonics.

Geol 3101s. Structural Geology. (Sci; 4 cr; QP–3220; SP–2111 or #)
Theory of rock deformation; description and classification of structures in the Earth’s crust; application of geometric, graphic, and map interpretation techniques to solution of structural problems; field mapping problem. (3 hrs lect, 3 hrs lab and field trips)

Geol 3111s. Introduction to Invertebrate Paleontology. (Sci-L; 4 cr; QP–1110; SP–1121 or #; not offered 1999-2000)
Morphology and evolutionary record of the major invertebrate groups characterized by significant fossil representation. Principles of evolution, paleoecology, and paleoenvironmental interpretations of fossil assemblages. (3 hrs lect, 3 hrs lab)

Geol 3196. Geology Field Camp. (Sci; 6 cr; QP–1110, 3240, 3410; SP–1121, 2121, 3101 or #)
Identification and solution of geological problems in the field, including stratigraphic correlation, construction of cross sections and geological maps, report preparation, field mapping, structural analysis, and environmental interpretation of Precambrian and Paleozoic rock units. Offered only during summer at the UMM Field Station in the Black Hills. (5-wk residential camp)

Geol 3401s. Geophysics. (Sci; 4 cr; QP–Math 1201, Phys 1200; SP–Math 1101, Phys 1101; not offered 2000-2001)
Propagation of seismic waves, earthquake seismology, and the structure of the Earth; the origin and nature of the Earth’s magnetic and gravitational fields; the Earth’s internal production and flow of heat; composition, state, and rheology of the Earth’s interior; plate tectonics and elementary geodynamics. (3 hrs lect)

Geol 3411s. Subsurface Methods. (Sci; 4 cr; QP–1120; SP–1101 or 1111 and #; not offered 2000-2001)
Techniques and methods of investigating subsurface geologic features. Includes a discussion of drilling methods, subsurface mapping methods, and techniques for interpreting subsurface geologic trends. (3 hrs lect, 2 hrs lab)

Geol 3421s. Airphoto Interpretation. (Sci; 4 cr; QP–1100; SP–1101 or 1111 and #; not offered 1999-2000)
Interpretation of geologic landforms, cultural features, and vegetative patterns as viewed from aerial photographs. Geologic features studied include volcanic, mass wasting, and glacial flow features; coastal and fluvial features; groundwater solution features; and structural features. (2 hrs lect, 4 hrs lab)

Geol 3501f. Hydrology. (Sci; 4 cr; QP–Math 1201; SP–Math 1101 or #; not offered 2000-2001)
Groundwater occurrence, movement, and contamination; water resource design and development; history of water wells, well drilling; installation and development of water supply systems; the future of fresh water supplies. (3 hrs lect)
German (Ger)

This discipline is in the Division of the Humanities. The purpose of the German curriculum is to introduce students to the language, literature, and culture of German-speaking countries. The courses are designed to promote a global perspective by encouraging students to take a close look at another culture and in this way become aware of both the diversity and similarity among all people. The courses satisfy general education and major/minor requirements and prepare students for teaching or graduate study.

Objectives—Students develop a number of skills in German, including comprehension and speaking, reading and writing, in order to communicate effectively in German about everyday situations, literature, and culture. On all levels, students gain an awareness of the structure of languages and facility with the German idiom, enabling them to read and write reports and papers. In literature seminars, students learn aesthetic appreciation through the interpretation of texts and to organize their thoughts for effective argumentation. Many German courses give students an interdisciplinary perspective, using history, art, architecture, music, and film. Cultural immersion abroad increases fluency and proficiency. The German program prepares its graduates for careers in teaching, business, political science, medicine, music, psychology, philosophy, and law.

Major Requirements

Ger 2001—Intermediate German I
Ger 2002—Intermediate German II
Ger 3001—Beginning German Conversation and Composition
Ger 3011—Readings in German
Ger 3021—Advanced German Conversation and Composition
Ger 3101—Survey of German Literature and Culture I
Ger 3102—Survey of German Literature and Culture II
Ger 3201—German Classicism
or Ger 3211—German Romanticism
Two additional elective 3xxx courses (4 credits each) in German

Courses with grades of D may not be used to meet the major requirements.

Minor Requirements

Ger 2001—Intermediate German I
Ger 2002—Intermediate German II
Ger 3001—Beginning German Conversation and Composition
Ger 3011—Readings in German
Ger 3021—Advanced German Conversation and Composition
Ger 3101—Survey of German Literature and Culture I
Ger 3102—Survey of German Literature and Culture II
One additional elective 3xxx course (4 credits each) in German

Courses with grades of D may not be used to meet the minor requirements.
Teacher Preparation Requirements
German majors and minors must complete required professional education courses, including methods and student teaching in German. They must also demonstrate their proficiency in German by examination. The examination is administered by the discipline and covers the skills of reading, writing, listening, and speaking. Students are required to pass with a rating of at least “good.” Regular use of the Language Teaching Center and, if possible, a foreign study experience are recommended to maintain language skills. Required courses may not be taken S-N, unless offered S-N only.

Study in Austria and Germany—Students interested in a foreign study experience may spend a semester or a full year in Berlin (Humboldt University), Vienna (Center for Central European Studies), or Freiburg (University of Freiburg) through the Institute of European Studies. Language prerequisites vary for individual programs. Internships are possible in all of them. Through the Global Campus, students may also participate in bilateral exchanges to Austria with Karl Franzens University in Graz and with the University of Salzburg.

Course Descriptions
Ger 1001f. Beginning German I. (FL; 4 cr)
Introduction to German as it is spoken and written presently. The course acquaints students with the basic sounds, structures, and vocabulary of German and enables them to understand, read, and write the language and to communicate in German about everyday situations. It makes them aware of the relationship between culture and language.

Ger 1002s. Beginning German II. (FL; 4 cr; QP–1100, 1101 or placement of #; SP–1001 or placement of #)
Continuation of 1001.

Ger 2001f. Intermediate German I. (IP; 4 cr; QP–1102 or placement of #; SP–1002 or placement of #)
The skills of listening, reading, and writing are enforced through grammar review and discussion of modern texts.

Ger 2002s. Intermediate German II. (IP; 4 cr; QP–1110 or #; SP–2002 or #)
German culture. A variety of readings in German to examine the historical and contemporary aspects of the culture of German-speaking countries. Students give oral reports and write papers about art, architecture, literature, philosophy, or music. They keep a journal of visits to sites on the World Wide Web relevant to topics such as geography, history, and culture.

Ger 3001f. Beginning German Conversation and Composition I. (IP; 4 cr; QP–1102 or #; SP–1002 or #)
This course builds on grammar and structure learned in the beginning sequence. Students engage in discussions about daily activities and topics of their interest. Models for writing and speaking are provided in the form of short stories, newspaper articles, and literary excerpts. Visual materials serve as points of departure for conversation and composition.

Ger 3011f. Readings in German. (IP; 4 cr; QP–1120 or #; SP–2002 or #)
Students read and analyze modern texts in order to advance their ability to comprehend and discuss various literary styles. This course is a prerequisite for more advanced courses in the major and minor.

Ger 3021s. Advanced German Conversation and Composition. (IP; 4 cr; QP–3100, 3105 or #; SP–3001, 3011 or #)
This course helps advanced-intermediate and advanced students learn to speak and write more precisely, idiomatically, and accurately. It is a refinement and extension of language skills through consideration of contemporary issues in newspapers, magazines, and literary readings.

Ger 3031. German Play. (ArtP; 4 cr; QP–1110 or #; SP–2001 or # offered when feasible)
Reading, study, and presentation of a short contemporary play. Enhances fluency and familiarity with the modern German idiom.

Ger 3101s. Survey of German Literature and Culture I. (Hum; 4 cr; QP–3105 or #; SP–3011 or #)
This course consists of a chronological study of German literature and its cultural background from the early beginnings through the early 19th century. Selected representative works are read and analyzed.

Ger 3102f. Survey of German Literature and Culture II. (Hum; 4 cr; QP–3105 or #; SP–3011 or #)
Chronological study of German literature and its cultural background from 1830 to 1920. Selected representative works by Stifter, Buechner, Hebbel, Keller, Storm, Hauptmann, and Kaiser are read and analyzed.

Ger 3201s. German Classicism. (Hum; 4 cr; QP–3200, 3201 or #; SP–3101, 3102 or #; not offered 2000-2001)
Readings in aesthetic theory and exemplary works by writers of the period. Texts by Goethe and Schiller are read and analyzed in conjunction with opera librettos based on their works. Videos of Donizetti’s Mary Stuart and Verdi’s Don Carlo.

Ger 3211s. German Romanticism. (Hum; 4 cr; QP–3200, 3201 or #; SP–3101, 3102 or #; not offered 1999-2000)
Readings in Romantic theory and works by important authors of the period: Wackenroder, Tieck, Novalis, Eichendorff, and E.T.A. Hoffmann. Other art forms, such as music and painting supplement the literary discussions.

Ger 3221s. Studies in German Drama. (Hum; 4 cr; QP–3105 or #; SP–3011 or #; not offered 2000-2001)
Selected works by contemporary German, Austrian, and Swiss playwrights: Brecht, Duerrenmatt, Frisch, Handke, Horvath, and Hacks.

Ger 3300fs. Variable Topics in German With English Discussion. (IP; 4 cr; repeatable when topic changes; open to all students; does not count toward major or minor)
Topics may be an in-depth study of one author or a specific period in German literature. Seminar discussions based on individual research. Readings and discussions are in English.

Ger 3400fs. Variable Topics in German With German Discussion. (IP; 4 cr; repeatable when topic changes; QP–3200, 3201 or #; SP–3011, 3102 or #; offered when needed)
Same content as 3300, except readings and discussions
are in German. However, for study abroad, advanced students in German complete an in-depth project in an area of their interest. This may consist of a number of papers and/or a journal. These students should discuss their topic in advance with the instructor.

**Ger 3501s. Women's Issues in Contemporary German Culture.** (IP; 4 cr; QP—3200, 3201 or #; SP—3101 or 3102 or #; not offered 2000-2001) The focus is on women as daughters and wives, the historical relationship of gender and class, and the lives of women from various ethnic backgrounds in Germany. Short stories, essays, and biographical materials document the evolution of women's rights in German society. Selected readings from Verena Stefan, Rosa Luxemburg, Sarah Kirsch, Irmintraud Morgner, and others.

**Ger 3601f. Studies in German Literature.** (Hum; 4 cr; QP—3105 or #; SP—3011, #; not offered 1999-2000) Selected readings in German reflecting modern literary trends. The course examines the cultural politics in the evolution of the literature in the formerly divided Germany, using plays, novels, biography, and documentary reports. It deals with questions of literary theory, history, and sociopolitical structures.

**Ger 3611f. Studies in Austrian Literature.** (Hum; 4 cr; QP—3105 or #; SP—3011, #; not offered 2000-2001) Selected readings in Austrian literature from 1875 to 1925, including Marie von Ebner-Eschenbach, Rainer Maria Rilke, Arthur Schnitzler, and Hugo von Hofmannsthall. Historical background for the period through Brigitte Hamann’s biography of Empress Elisabeth and the modern musical Elisabeth, as well as the operetta Die Fledermaus and Istvan Szabo’s film Oberst Redl.

**Ger 1993f,s, 2993f,s, 3993f,s, 4993f,s. Directed Study.** (1-5 cr per sem; prereq #) A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

### History (Hist)

This discipline is in the Division of the Social Sciences.

**Objectives**—The history curriculum is designed to introduce students to the study of the human past. Students majoring in history learn to approach decision-making with an awareness of a broad range of choices; learn to think critically and communicate their ideas effectively; integrate their academic study with their intellectual and moral maturation; understand the construction of historical knowledge; and learn how to learn. The curriculum emphasizes the role of the student as an active learner and encourages individualized learning experiences, including those outside of established coursework, and the development of close working relationships between students and faculty.

### Major Requirements include:

A demonstrated familiarity with a range of historical periods and cultures sufficiently broad to allow meaningful exploration of “alternative communities” in time and place and to develop an empathy with alternative solutions to life’s problems.

A demonstrated ability to critically analyze, interpret, and synthesize various types of historical materials, which need not be limited to written documents.

A demonstrated awareness of how the pursuit of a knowledge of history reflects the student’s own quest for personal and intellectual growth and how that pursuit in turn shapes the student’s growth. In addition, an awareness of the way a society’s search for historical explanations relates to that society’s ideals, circumstances, and practices.

A demonstrated ability to initiate and develop a course of historical inquiry.

**Hist 0101—Competence Evaluation**

**Hist 1101—Introduction to World History to 1500** or **Hist 1102—Introduction to World History Since 1500**

**Hist 4110-4120—Tutorial in History**

Courses with grades of D may not be used to meet the major requirements.

The student must submit a file of materials to present evidence of meeting the first four requirements stated above. The file need not be limited to materials produced in history courses.

1. At least three semesters before graduation, the student and adviser assess progress toward the major and, consulting with the remainder of the history faculty, determine work that remains to complete the major.
2. The student selects the materials for the file; the file is available only to the student, the history faculty, and persons designated by the student. The materials, as well as comments by faculty who have evaluated them, are to be placed in the file as they are completed.
3. The file need not be limited to written materials but may include, for example, multimedia presentation materials or tape recordings of oral presentations. Written materials may include research papers, book reviews, essays, project reports, and similar work.
4. The file must include a description of the plan of study and a description of the student’s progress in the major. The student is responsible for developing a plan of study in conjunction with an adviser from the history faculty. Together they periodically assess the student’s progress.
5. The student should enroll in Hist 0101—Competence Evaluation for the semester in which the completion of the major is expected. An S grade from the adviser notifies the Registrar’s Office that the requirements of the major have been met.
Minor Requirements include Hist 1101 or 1102 and four additional courses of which at least three are at the 2xxx level or higher. There should be evidence of work in at least two geographic areas, with at least one of these in a non-Western area.

Teacher Preparation Requirements
Students seeking teaching licensure in any of the social sciences must complete a social science major. History majors seeking teaching licensure must also complete a social science major and the required professional education courses, including methods (SScE 4103—Methods of Teaching Social Science in the Secondary School) and student teaching in social studies. Students should gain some exposure to the subject of minority groups. Required courses may not be taken S-N unless offered S-N only.

Course Descriptions
Hist 0101f,s. Competence Evaluation. (0 cr; required for history majors; S-N only)
Students enroll in this course for the semester in which the completion of the major is expected. An “S” grade from the adviser notifies the Registrar’s Office that the requirements of the major have been met.

Hist 1101f. Introduction to World History to 1500. (Hist; 4 cr)
Methods, themes, and problems in the study of world history to 1500.

Hist 1102s. Introduction to World History Since 1500. (Hist; 4 cr)
Methods, themes, and problems in the study of world history since 1500.

Hist 1301f. Introduction to U.S. History. (Hist; 4 cr)
Methods, themes, and problems in the study of the history of the United States.

Hist 1501s. Introduction to Asian Civilization. (IP; 4 cr)
History of major civilizations of Asia to the present.

Hist 1601s. Latin American History: A Basic Introduction. (IP; 4 cr)
Methods, themes, and problems in the study of Latin American history.

The experience of the original Americans and their interaction with later immigrants.

Hist 2311f. African American History. (HDiv; 4 cr; not offered 2000-2001)
The African American experience in historical perspective: African origins, experiences in slavery, struggles for freedom and equality, economic and cultural development.

Hist 3000. Variable Topics in History. (Hist; 4 cr; repeatable when topic changes; offered when feasible)
Study of a historical topic that transcends the traditional chronological or geographical categories. Possible topics include the history of historical writing, science, and Christianity.

Hist 3001f. Families Through the Prism of Memory, Genealogy, and History. (Hist; 4 cr)

Hist 3002f. Military Strategy. (Hist; 4 cr; not offered 2000-2001)

Hist 3003s. World War I. (Hist; 4 cr; not offered 2000-2001)

Hist 3100f. Variable Topics in European History I. (Hist; 4 cr; repeatable when topic changes)
Political, social, intellectual, or economic history of Europe from the end of the Middle Ages to 1750. Possible topics include the Renaissance, the Reformation, royal absolutism, and the scientific revolution.

Hist 3150f. Variable Topics in European History II. (Hist; 4 cr; repeatable when topic changes)
Political, social, intellectual, or economic history of Europe from 1750 to the present. Possible topics include the fascist era, development of nationalism, World War I, World War II, and the era of the French Revolution and Napoleon.

Hist 3151f. Modern Europe. (Hist; 4 cr)

Hist 3200f. Variable Topics in European National History. (Hist; 4 cr; repeatable when topic changes)
Political, social, intellectual, or economic history of selected European nations. Possible topics include Tudor and Stuart England, the English Civil War, modern Britain, modern France, imperial Russia, and Soviet Russia.

Hist 3201. Honors: Radicalism and the 17th-Century English Revolution. (Hist; 4 cr; prereq # for students not in Honors Program)

Hist 3202f. Russian Revolution. (Hist; 4 cr)

Hist 3300. Variable Topics in Colonial and U.S. History Before 1860. (See specific topics for general education categories; 4 cr; repeatable when topic changes)
Possible topics include societies of colonial America, the creation of the American Republic, race and culture in early America, and slavery.

Hist 3301f. Red, White, and Black: Race and Culture in Early America. (HDiv; 4 cr)

Hist 3350. Variable Topics in U.S. History Since 1860. (See specific topics for general education categories; 4 cr; repeatable when topic changes)
Possible topics include the Civil War era, America industrialization, World War II, the American presidency in the 20th-century, and the 1960s.

Hist 3351f. The U.S. Presidency Since 1900. (SS; 4 cr; not offered 1999-2000)

Hist 3352s. The U.S. 1960s. (Hist; 4 cr)

Hist 3353s. World War II. (Hist; 4 cr; not offered 2000-2001)

Hist 3450s. Variable Topics in U.S. History. (See specific topics for general education categories; 4 cr; repeatable when topic changes)
Possible topics include the history of American immigration, education, race relations in the United States, and studies in American biography.

Hist 3451s. Facing West. (4 cr)

Hist 3500. Variable Topics in Modern Asian History. (IP; 4 cr; repeatable when topic changes; offered when feasible)
Examines a selected topic in the political, social, intellectual, or economic history of modern Asia.
Humanities

Hist 3550f. Variable Topics in Asian National History. (IP; 4 cr; repeatable when topic changes) Topics in the history of selected Asian nations.

Hist 3600f. Variable Topics in Latin American History. (IP; 4 cr; repeatable when topic changes) Political, economic, social, cultural, and national history of Latin America. Possible topics include Cuban or Mexican revolutions, dependence and underdevelopment, great books on Latin America, and Brazil.

Hist 3601f. Great Books. (IP; 4 cr)

Hist 3700. Variable Topics in the History of Women. (See specific topics for general education categories; 4 cr; repeatable when topic changes; QP–Hist 1101 or Hist 1102 or Hist 1201; SP–1001 or 1002 or SP–Hist 1201 and WoSt 1101) Possible topics include a historical study of women and religion, a historical study of thought about American women, a cross-cultural study of the history of women.

Hist 3701s. Women and Religion: A History. (SS; 4 cr; QP–1101 or 1102 or 1201; SP–1001 or 1002 or 1201 and WoSt 1101) A historical discussion of women in non-Western and Western religions.

Hist 3702f. The History of Women in the West. (HDIV; 4 cr; QP–Hist 1101, Hist 1102, Hist 1301; SP–WoSt 1101 or Hist 1101, Hist 1102, Hist 1301; not offered 2000-2001) Focuses on the intellectual as well as political, social, and economic history of pre-European, western European, and American women.

Hist 3703s. 20th-Century European Women. (4 cr; QP–Hist 1101 or Hist 1102 or Hist 1201; SP–WoSt 1101, Hist 1101 or Hist 1102 or Hist 1201) A culminating historical research experience. Students should register for 4110 before 4120.

Hist 4110-4120f,s. Tutorial in History. (1-5 cr; repeatable; QP–Hist 1101, Hist 1102 or Hist 1201; SP–WoSt 1101, Hist 1101 or Hist 1102 or Hist 1201) A culminating historical research experience. Students should register for 4110 before 4120.

Hist 3993f,s. Directed Study. (1-5 cr; repeatable; QP–Hist 1101, Hist 1102 or Hist 1201; SP–WoSt 1101, Hist 1101 or Hist 1102 or Hist 1201) A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

Honors Program

(See Academic Information section for detailed program requirements and a sample course list.)

Humanities (Hum)

This interdisciplinary group of courses is in the Division of the Humanities.

Objectives—Humanities courses are designed to introduce students to their cultural heritage. This interdisciplinary area explores the literatures and other art forms of the world. Advanced courses in the Division of the Humanities supplement the introductory courses.

Course Descriptions

Hum 1000. Variable Topics. (See specific topics for general education categories; 4 cr; repeatable when topic changes; offered when feasible) Opportunity to study a traditional literary or narrative form or an idea as it appears in a number of cultures. Topic to be announced.

Hum 1001f. Contesting Visions of the American West. (HDIV; 4 cr; not offered 1999-2000) Examines literary and cultural representations of the American West from a range of perspectives, including those of Asian and European immigrants, explorers, and Native Americans.

Hum 1002. Icelandic Saga. (4 cr)

Hum 1050. Variable Topics in Classics in Translation. (See specific topics for general education categories; 4 cr; repeatable when topic changes; offered when feasible) Study of selected Greek and Roman texts as works of literature, reflections of a civilization, and influences on Western culture. Topic to be announced.

Hum 1051s. Greek Drama. (Hum; 4 cr; not offered 2000-2001) Study of Greek drama.

Hum 1100. Variable Topics in Western World Literature. (See specific topics for general education categories; 4 cr; repeatable when topic changes; offered when feasible) Emphasis on continental works in a single genre (e.g., the novel) or from a single international literary movement (e.g., romanticism or symbolism). Topic to be announced.

Hum 1101f. The European Novel. (Hum; 4 cr; not offered 2000-2001) Readings in major continental novelists of the 19th and 20th centuries.

Hum 1150. Variable Topics in Non-Western World Literature. (IP; 4 cr; some topics may be offered as honors courses; repeatable when topic changes; offered when feasible) Study of non-Western literature. Courses may emphasize a single genre (e.g., the novel), a literary movement (e.g., postmodernism), or an idea (e.g., nationalism) as it appears in a number of cultures, or may focus on the literary works of a particular non-Western culture (e.g., Middle Eastern, West African, or Native American). Topic to be announced.

Hum 1300. Variable Topics in French Literature and Culture. (See specific topics for general education categories; 4 cr; repeatable when topic changes) This course will be taught on a variety of topics such as modern French literature in translation and women authors in French. It will be offered as both a regular course and an honors course. Topic to be announced.

Hum 1301. Literature and Culture of French-Speaking Africa and the Caribbean. (IP; 4 cr) Historical and cultural perspectives of Francophone Africa and the Caribbean via study of literature. Topics studied will include tribal Africa, slavery, colonialism, revolution, independence, family structures, and social institutions.

Hum 1302s. French Cinema. (IP; 4 cr) The history of filmmaking in France from the Lumière brothers to the present; introduction to the major trends in film theory. Taught in English, all films have English subtitles. Offered as both regular and honors course.
Hum 1350. Honors: Variable Topics in French Literature and Culture. (See specific topics for general education categories; 4 cr; repeatable when topic changes) This course will be taught on a variety of topics such as modern French literature in translation and women authors in French. It will be offered as both a regular course and an honors course. Topic to be announced.

Hum 1351. Honors: Literature and Culture of French-Speaking Africa and the Caribbean. (IP; 4 cr) Historical and cultural perspectives of Francophone Africa and the Caribbean via study of literature. Topics studied will include tribal Africa, slavery, colonialism, revolution, independence, family structures, and social institutions.

Hum 1352s. Honors: French Cinema. (IP; 4 cr) The history of filmmaking in France from the Lumière brothers to the present; introduction to the major trends in film theory. Taught in English, all films have English subtitles. Offered as both regular and honors course.

Hum 1451s. German Literature in Film. (IP; 4 cr; does not count toward German major or minor; not offered 2000-2001) Development of the German film as expressionistic art form. Film as text, film as history, film as aesthetic expression. Film presentations are in German but with English subtitles in most cases. Readings and lectures are in English.

Hum 1452s. Honors: German Literature in Film. (IP; 4 cr; does not count toward German major or minor; not offered 2000-2001) Development of the German film as expressionistic art form. Film as text, film as history, film as aesthetic expression. Film presentations are in German but with English subtitles in most cases. Readings and lectures are in English.

Hum 1500s. Contemporary Latin American Novel in Translation. (IP; 4 cr; repeatable with #; does not count toward Spanish major or minor) Development of the contemporary Latin American novel and short fiction from the 1960s to the present. From the decade of the sixties, the new Latin American novel of the “Boom” emerges along with the names of writers such as García Márquez, Carlos Fuentes, Juan Rulfo, José Donoso, Luisa Valenzuela, and Vargas Llosa.

Hum 1510s. Honors: Contemporary Latin American Novel in Translation. (IP; 4 cr; repeatable with #; does not count toward Spanish major or minor) Development of the contemporary Latin American novel and short fiction from the 1960s to the present. From the decade of the sixties, the new Latin American novel of the “Boom” emerges along with the names of writers such as García Márquez, Carlos Fuentes, Juan Rulfo, José Donoso, Luisa Valenzuela, and Vargas Llosa.

Hum 1993f,s, 2993f,s, 3993f,s, 4993f,s. Directed Study. (1-5 cr; repeatable; prereq #)

Hum 4994f,s. Senior Honors Project. (1-5 cr; repeatable; prereq participation in Honors Program, #) A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

Interdisciplinary Studies (IS)

This is an interdisciplinary group of courses under the authority of the vice chancellor for academic affairs and dean.

Objectives—Through interdisciplinary studies, students may investigate subjects viewed from the perspectives of two or more traditional academic disciplines. Interdisciplinary studies may take the form of well-structured internships or regular classroom courses, or directed study projects that stimulate close student-faculty relationships.

Students interested in interdisciplinary internships or directed study projects should consult with their advisers and appropriate division chairpersons concerning a course prospectus, proposed study activities, and proposed criteria and methods for evaluating their work. In the case of internships, students should discuss their plans with the director of the Career Center, who assists with internship placements. A signed Directed Study Approval form or Internship Approval form (available in the academic division offices) is required in order to register for an interdisciplinary directed study or internship. The approval of the vice chancellor for academic affairs and dean is necessary to register for a directed study or an internship.

Course Descriptions

IS 1001f. First-Year Seminar: Human Diversity. (CE; 2 cr) This first-year course aims to facilitate students’ transition from high school to a collegiate environment. Special emphasis is placed on themes that help sensitize students to the spectrum of ideas within the academic setting as well as contemporary society.

IS 1051. Introduction to College Learning Skills. (4 cr; counts toward the 60-cr general education requirements; prereq participation in Gateway Program or #; offered summer only; S-N only) Essential skills for success in higher education. Computing tools, reading and writing to learn and communicate, basic math skills. Thought processes and standards of academic dialogue.

IS 1061s. Learning to Learn. (SS; 2 cr; prereq #; S-N only) Basic learning and thinking skills; procedures for acquiring knowledge and conducting academic inquiry; formulating and evaluating ideas, arguments, and abstract principles. Introduction to elements of the learning process. Assessment of individual approaches and development of individual strategies for learning.

IS 1071f,s. Systematic Introduction to the Art and Science of Emergency Medical Care. (4 cr; prereq CPR and first aid certification; S-N only) Introduction to emergency medical care. Develops skills and knowledge to respond appropriately to a medical emergency. (The Stevens County Ambulance Service sets and requires an independent fee.)

Division Structure and Course Descriptions
IS 1091f,s. Ethical and Social Implications of Technology. (E/CR; 2 cr)
Description of appropriate technological advances. Historical development related to technology and its development cycle. Discussion of the ethical and social implications of technology.

IS 3100. Interdisciplinary Studies in Social Science. (1-4 cr; offered when feasible)
Studies of topics, applying expertise from various social science disciplines, e.g., women in the social sciences.

IS 3705f, 3710f,s. Peer Tutoring in College. (SS; 3-6 cr; prereq #)
Principles and practice of peer tutoring, one-to-one and in small groups. Students learn tutoring methods during fall semester and tutor courses that they have already completed successfully during spring semester.

IS 3705f. Peer Tutoring in College. (SS; 3 cr; prereq #)
Topics in pedagogical theory regarding peer tutoring processes, and practice in peer tutoring.

IS 3710f,s. Peer Tutoring in College. (SS; 1 cr; repeatable to 3 cr; prereq 3705)
Tutor students in selected courses.

IS 3800f,s. Practicum in Social Sciences. (1-2 cr; repeatable to 4 cr; prereq #; S-N only)
Supervised experience of selected learning activities such as discussion group leader, lab assistant, or research assistant.

IS 3893. Prior Learning Directed Study. (1-4 cr; repeatable; prereq #)
Individualized learning project combining prior learning with faculty-directed new learning, awarding academic credit for both. (When content is discipline-related, discipline designation will appear on transcript and credit may count toward appropriate general education requirement category.)

IS 3896. Prior Learning Internship. (1-16 cr; repeatable; prereq #; S-N only)
An educational experience in a work environment providing field application for the student’s theoretical classroom learning experiences. The prior learning, such as in social service or business settings, would have occurred prior to the student’s matriculation. The prior learning is documented and combined with faculty-directed new learning, with credit awarded for both.

IS 3996f,s. Interdisciplinary Internship. (1-16 cr; repeatable; S-N only)
One-semester educational experience in a work environment providing field applications for the student’s theoretical classroom learning experiences. Approved Learning Contract required for registration.

IS 4101s. Introduction to Professional Conduct Codes, Legal Constraints, and Ethics in the Human Services. (E/CR; 2 cr; QP–20-20 3xxx human services courses [see LAHS listing] or #; SP–jr. 10 cr; 3xxx or 4xxx human services courses or #)
Concepts of professional ethics in human services professions; ethically relevant legal mandates and constraints on professional practice; practical problems in the application of ethical principles.

IS 4994f,s. Senior Honors Project. (1-5 cr; repeatable; prereq participation in Honors Program, #)
A substantial scholarly or creative work (at the undergraduate level) across two or more disciplines. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

University College Courses

IS 1301f. UC: Dakota Language I. (4 cr; not offered 2000-2001)
An introduction to speaking, writing, and reading Dakota language and an overview of Dakota culture.

IS 1302s. UC: Dakota Language II. (FL; 4 cr; not offered 2000-2001)
A continuation of 1301 with greater emphasis on conversation and culture.

IS 2011f,s. UC: English Language Teaching Assistant Program. (IP; 12 cr)
Students assist teachers of English in one of several countries where English is not the primary language. Assignments are for eleven weeks. Housing and board are provided or subsidized by the host school.

Latin American Area Studies (LAAS)

This is an interdisciplinary major under the authority of the vice chancellor for academic affairs and dean. The program is administered by the coordinator of Latin American Area Studies.

Objective—To provide a basic introduction to the cultures and societies of Latin America, to provide the means essential to gain an understanding of Latin America and its diverse peoples, and to place Latin America in a comparative perspective.

Major Requirements

Proficiency in Spanish equivalent to that required for the completion of Span 2002
4 credits in Latin American history (Hist 1601—Latin American History: A Basic Introduction or its equivalent is strongly recommended)
1 credit in LAAS 3201—Bibliographical Tools and Journals in Latin American Area Studies
1-4 credits in LAAS 4101—Senior Tutorial in Latin American Area Studies
1 credit per semester, after declaring major and when in residence, in LAAS 3100—Contemporary Latin America; no more than 4 credits can be applied to the LAAS major, and up to 4 credits can be applied to the 20-credit elective requirement
20 additional credits selected from the courses listed below; these courses must come from at least three different academic disciplines. Students are encouraged to use elective credits to acquaint themselves with as many academic fields of Latin American studies as possible. Any directed study
course for which an instructor is available is acceptable provided the subject matter is appropriate. These courses may be applied to the 20-credit elective requirement. Students may have up to a two-course overlap with any other major. Additional overlap is possible, but must be approved by the LAAS coordinator.

Course Descriptions

Anth 2300f,s. Variable Topics in Latin American Cultures and Societies. (IP; 4 cr; repeatable when topic changes; QP–1110 or Soc 1100; SP–1111 or Soc 1101)
Same as Soc 2300. Use of archaeological, historical, and contemporary materials. Topics may include political institutions, media, popular culture, ethnicity, class, ecology, and cultures.

Anth 2301f. Social Change and Development in Latin America. (IP; 4 cr; QP–1110 or Soc 1100; SP–1111 or Soc 1101)

Anth 2302s. Women in Latin America. (IP; 4 cr; QP–1110 or Soc 1100; SP–1111 or Soc 1101)

Anth 1993f,s, 2993f,s, 3993f,s, 4993f,s. Directed Study. (1-5 cr; repeatable; prereq #)
Research, field, or cultural experiences.

Arth 3251s. Pre-Columbian Arts of the Americas. (FA; 4 cr; QP–1100 or 1201 or 1202 or 1203; SP–1100 or 1101 or 1102 or 1103; not offered 1999-2000)
The pre-colonial arts of the native peoples of Mexico, South America, and the southwestern United States from 1000 B.C.E. to the 16th century C.E.

Econ 1993f,s, 2993f,s, 3993f,s, 4993f,s. Directed Study. (1-5 cr; repeatable; prereq #)
Literature of Latin American economics.

Hist 1601s. Latin American History: A Basic Introduction. (IP; 4 cr)
Methods, themes, and problems in the study of Latin American history.

Hist 3000. Variable Topics in History. (Hist; 4 cr; repeatable when topic changes; offered when feasible)
Study of a historical topic that transcends the traditional chronological or geographical categories. Possible topics include the history of historical writing, science, and Christianity.

Hist 3600f. Variable Topics in Latin American History. (IP; 4 cr; repeatable when topic changes)
Political, economic, social, cultural, and national history of Latin America. Possible topics include Cuban or Mexican revolutions, dependence and underdevelopment, great books on Latin America, and Brazil.

Hist 3993f,s, 4993f,s. Directed Study. (1-5 cr; repeatable; prereq #)
Opportunity to study analytically a limited topic in Latin American history. Topic determined by the student and instructor.

Hum 1500s. Contemporary Latin American Novel in Translation. (IP; 4 cr; repeatable with # does not count toward Spanish major or minor)
Development of the contemporary Latin American novel and short fiction from the 1960s to the present. From the decade of the sixties, the new Latin American novel of the “Boom” emerges along with the names of writers such as García Márquez, Carlos Fuentes, Juan Rulfo, José Donoso, Luisa Valenzuela, and Vargas Llosa.

LAAS 3100f,s. Contemporary Latin America. (1 cr; prereq LAAS major; to be repeated each sem a student is in residence; only 4 cr may apply to LAAS major)
Opportunity for LAAS majors to read about and discuss in historical and cultural contexts the more important contemporary developments in Latin America.

LAAS 3201. Bibliographical Tools and Journals in Latin American Area Studies. (1 cr; prereq LAAS major; offered when feasible)
For the student new to the major. Introduction to the standard bibliographical tools and journals in Latin American area studies.

LAAS 4101. Senior Tutorial in Latin American Area Studies. (1-4 cr; QP–1700; SP–3201; prereq sr LAAS major; offered when feasible)
Individual reading in subjects needing further development before completing the LAAS major. Subjects determined by LAAS faculty in consultation with the senior LAAS major.

LAAS 4994f,s. Senior Honors Project. (1-5 cr; repeatable; prereq participation in Honors Program, #)
A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

Pol 1993f,s, 2993f,s, 3993f,s, 4993f,s. Directed Study. (1-5 cr; repeatable; prereq pol sci major or #)
Latin American Political Science

Soc 2300f,s. Variable Topics in Latin American Cultures and Societies. (IP; 4 cr; repeatable when topic changes; QP–1100 or Anth 1110; SP–1101 or Anth 1111)
Same as Anth 2300. Use of archaeological, historical, and contemporary materials. Topics may include political institutions, media, popular culture, ethnicity, class, ecology, and cultures.

Soc 1993f,s, 2993f,s, 3993f,s, 4993f,s. Directed Study. (1-5 cr; repeatable; prereq #)
Literature of Latin American sociology.

Span 1001f. Beginning Spanish I. (FL; 4 cr)
Study of basic skills of Spanish (reading, speaking, writing, listening) and cultural contexts of Latin America and Spain. Students should demonstrate the ability to: read and comprehend materials such as ads, instructions, etc.; engage in simple conversations in Spanish, to speak about themselves and express their basic needs; construct sentences and questions in Spanish in order to write accurately at the short paragraph level; comprehend short conversations.

Span 1002s. Beginning Spanish II. (FL; 4 cr; QP–1 qtr of Span or placement; SP–1001 or placement or #)
Second course in the sequence beginning with 1001.

Span 2001f. Intermediate Spanish I. (IP; 4 cr; QP–3 qtrs of Span or placement; SP–1002 or placement or #)
Review and building of skills with a focus on basic Spanish language structures and tenses. Students should demonstrate the ability to read critically and understand the context of literary and cultural items; respond to simple questions, avoid basic pronunciation errors, engage in short conversations, discuss assigned themes at some length; write accurately at the paragraph level, avoiding common grammatical errors; comprehend conversations.
Span 2002s. Intermediate Spanish II. (IP; 4 cr; QP - 1 qtr intermediate Span or #; SP - 2001 or placement or #)
Review and building of skills in more complex language structures, tenses, and moods. Students should demonstrate the ability to read with some basic literary analysis and analyze cultural differences; read out loud with understanding, speak in emotive and persuasive language contexts, hold conversations, speak extemporaneously on assigned topics; write analytically and accurately at the short paper level; comprehend short dialogues and paragraphs.

Span 3001f. Advanced Spanish I. (IP; 4 cr; QP - 3 qtrs intermediate Span)
Study of complex language structures, expansion and reinforcement of grammatical constructions, and analysis of literary and/or cultural readings. Students should demonstrate the ability to carefully read, comprehend, and analyze literary works and/or cultural readings; discuss motives and themes in such works, read out loud with proficiency and meaning, hold sustained conversations; use correct grammar to write and present compositions analyzing the works; comprehend main points in Scola televised presentations and materials.

Span 3002s. Advanced Spanish II. (IP; 4 cr; QP - 1 qtr advanced Span; SP - 3001, #3101)
Second course in the sequence beginning with 3001.

Span 3101s. Introduction to Spanish Literature. (Hum; 4 cr; QP - 1 qtr advanced Span; SP - 2002, #3002)
Study of a variety of literary genres representing the literature of Spain and Latin America; rudiments of literary analysis and interpretation. Students should demonstrate the ability to read and comprehend the literary works studied, analyze works critically while developing a sensitivity toward certain cultural aspects and literary nuances expressed therein; participate in and comprehend sustained class discussion with respect to certain topics or themes; write with accuracy in Spanish and show some degree of analytical proficiency at the short paper level.

Span 3202s. Masterpieces of Spanish Literature II. (Hum; 4 cr; QP - 3 qtrs advanced Span, 1 qtr 3101; SP - 3201)
Masterpieces from Medieval, Renaissance, Golden Age, 18th century, and 19th century. Students should demonstrate the ability to analyze literary texts, using the text as well as the aesthetic, political, historical, and philosophical context in which the work was produced. Students must also demonstrate the ability to discuss in class the ideas of the texts and the context, and they must write papers with grammatical precision and rigorous research.

Span 3301f. Masterpieces of Latin American Literature I. (Hum; 4 cr; QP - 3 qtrs advanced Span, 1 qtr 3101; SP - 3002, 3101)
Masterpieces from Latin America in the 20th century. Students should demonstrate the ability to analyze literary texts, using the text as well as the aesthetic, political, historical, and philosophical context in which the work was produced. Students must also demonstrate the ability to discuss in class the ideas of the texts and the context, and they must write papers with grammatical precision and rigorous research.

Span 3302s. Masterpieces of Latin American Literature II. (Hum; 4 cr; QP - 3 qtrs advanced Span, 1 qtr 3101; SP - 3002, 3101)
Masterpieces from Latin America from 1492 to 1900. Students should demonstrate the ability to analyze literary texts, using the text as well as the aesthetic, political, historical, and philosophical context in which the work was produced. Students must also demonstrate the ability to discuss in class the ideas of the texts and the context, and they must write papers with grammatical precision and rigorous research.

Span 3400s. Variable Topics in Latin American Literature. (Hum; 4 cr; repeatable when topic changes; QP - 3 qtrs advanced Span, 1 qtr 3101; SP - 3002, 3101)
Topic to be announced. Students should demonstrate the ability to analyze literary texts, using the text as well as the aesthetic, political, historical, and philosophical context in which the work was produced. Students must also demonstrate the ability to discuss in class the ideas of the texts and the context, and they must write papers with grammatical precision and rigorous research.

Span 4993f,s. Directed Study. (1-5 cr; repeatable; prereq #)

Spch 3411f. Intercultural Communication Theory and Research. (HDiv; 4 cr; QP - 1101 or #; SP - 2101 or #)
Study of intercultural communication from an interpersonal and group perspective. Includes qualitative and quantitative methods.

Liberal Arts for the Human Services (LAHS)
This interdisciplinary major is in the Division of the Social Sciences.

Objectives—This program’s three main purposes are to provide a firm liberal arts basis for understanding individual human behavior in its social context; provide the liberal arts foundation for professional work in baccalaureate-level human services occupations such as counseling, casework, personnel work, and administration of human services in federal and state agencies, private businesses, or professional organizations; and prepare students for graduate work in the human services professions.

Major Requirements

Anth 1111—Introductory Cultural Anthropology
or Soc 1101—Introductory Sociology
Psy 1051—Introduction to Psychology
or Psy 1101-1102—Foundations of Psychology I-II
(students planning to take a majority of LAHS credits in psychology should choose Psy 1101-1102 rather than Psy 1051)
Math 1601—Introduction to Statistics
or Math 2601—Statistical Methods

The minimum additional requirements for a major in liberal arts for the human services are:

a) 40 credits to be selected from the courses listed below, with a minimum of 16 credits each in anthropology/sociology and upper-division psychology
b) at least 4 credits of Psy 4896—Field Experiences in Psychology or IS 3996—Interdisciplinary Internship

c) IS 4101—Introduction to Professional Conduct Codes, Legal Constraints, and Ethics in the Human Services

Students develop a coherent program of study in consultation with their major advisers generally no later than the spring semester of their sophomore year. Advisers normally are faculty with a background or specialties related to the human services area.

Students should discuss the arrangement of their field experience with their LAHS advisers no later than the fall semester of their junior year. Information concerning specific field placements can be obtained from the director of the Career Center or an LAHS faculty adviser.

Because LAHS students pursue varied careers, they are advised to include in their programs courses appropriate to their career plans. For instance, students intending to seek careers involving public administration or policy formulation should take such courses as:

- Econ 1101—Principles of Economics
- Soc 2101—Prejudice, Discrimination, and Systems of Oppression
- Soc 3121—Sociology of Gender
- Soc 3200—Topics in Social Stratification
- Spch 3411—Intercultural Communication Theory and Research
- Spch 3421—Organizational Communication Theory and Research
- possibly Mgmt 2201—Principles of Management

Students intending to seek careers in counseling or in other direct helping professions working with adults should take such courses as:

- Psy 3051—The Psychology of Women
- Psy 3101—Learning Theory and Behavior Modification
- Psy 3301—Personality I: Dimensions and Assessment
- Psy 3311—Personality II and Psychopathology I
- Psy 3312—Psychopathology II
- Psy 3403—Developmental Psychology III: Adulthood, Aging, and Death
- Psy 3501—Social Psychology
- Psy 3511—Applied Social Psychology
- Psy 4101—Helping Relationships
- Soc 3121—Sociology of Gender
- Soc 3141—Sociology of Deviance
- Spch 1061—Interpersonal Communication
- Spch 3411—Intercultural Communication Theory and Research
- Spch 3421—Organizational Communication Theory and Research

If the career involves work with children, students should take:

- Psy 3401—Developmental Psychology I: Child Psychology
- Psy 3402—Developmental Psychology II: Adolescence

if with the chemically dependent:

- Psy 1081—Drugs and Human Behavior

A directed study or empirical research course on chemical dependency

In all instances, students should consult with their advisers when designing their programs.

Students should complete the professional ethics course (IS 4101—Introduction to Professional Conduct Codes, Legal Constraints, and Ethics in the Human Services) during the year before their internship (IS 3996—Interdisciplinary Internship) or field experience (Psy 4896—Field Experiences in Psychology). Students who plan to enroll in Psy 4101—Helping Relationships should complete the course before their internship or field experience.

Courses with grades of D may not be used to meet the major requirements.

**Course Descriptions**

**Anth 2300f.s. Variable Topics in Latin American Cultures and Societies.** (IP; 4 cr; repeatable when topic changes; QP—1110 or Soc 1100; SP—1111 or Soc 1101)

Same as Soc 2300. Use of archaeological, historical, and contemporary materials. Topics may include political institutions, media, popular culture, ethnicity, class, ecology, and cultures.

- **Anth 2301f. Social Change and Development in Latin America.** (IP; 4 cr; QP—1110 or Soc 1100; SP—1111 or Soc 1101)
- **Anth 2302s. Women in Latin America.** (IP; 4 cr; QP—1110 or Soc 1100; SP—1111 or Soc 1101)

**Anth 2400s. Variable Topics in American Indian Cultures and Societies.** (See specific topics for general education categories; 4 cr; repeatable when topic changes; QP—1110 or Soc 1100; SP—1111 or Soc 1101; not offered 1999-2000)

In-depth study of topic concerning North American Indians. Topics vary, e.g., traditional Native American societies and cultures, Native American archaeology, Native American religions.

- **Anth 2401s. Traditional Native American Cultures and Societies.** (HDiv; 4 cr)

- **Anth 2451f. 20th-Century Native Americans.** (HDiv; 4 cr)

Same as Soc 2451. The cultures, problems, and resurgence of Native Americans in the 20th century. Government policies; education, religion, self-determination, family, gaming, etc.

- **Anth 3101f. The Anthropology of Religion.** (SS; 4 cr; QP—1110 or Soc 1100; 5 addtl cr in Anth or Soc recommended; SP—1111 or Soc 1101; 4 addtl cr in Anth or Soc recommended)
Comparative study of religion, magic, witchcraft, etc., in various parts of the world. Theories and concepts developed by anthropologists in dealing with religious phenomena in a cross-cultural perspective.

**Anth 3200s. Variable Topics in Comparative Ethnography.** (Env; 4 cr; repeatable when topic changes; QP–1110 or Soc 1100; SP–1111 or Soc 1101 or #; not offered 1999-2000)

Topics in social systems, beliefs, values, and customs of societies around the world. Comparison and analysis of how various components of social and cultural systems interact with one another and with their environments.

**Anth 3300s. Variable Topics in Area Studies.** (IP; 4 cr; repeatable when topic changes; QP–1110 or Soc 1100; SP–1111 or Soc 1101 or #; not offered 2000-2001)

Same as Soc 3300. In-depth study of societies and cultures (values, religions, politics, economic institutions, kinship, family organization) of a particular part of the world, e.g., Africa, India and South Asia, China, Pacific Islands.

**Anth 3301s. India and South Asia.** (IP; 4 cr; QP–1110 or Soc 1100; SP–1111 or Soc 1101 or #; not offered 2000-2001)

**Econ 1101f, s. Principles of Economics.** (SS; 4 cr; prereq high school algebra or #)

Introduction to the study of scarce resource allocation in a market economy. Supply and demand, consumer theory, the theory of the firm, market structure, pricing of the factors of production. Measurement of economic performance; national income, inflation, and unemployment; competing macroeconomic theories; stabilization policies.

**Econ 3201f. Microeconomic Theory.** (SS; 4 cr; QP–1101, Math 1140; SP–1101, Math 1021 or #)

Analytical approach to decision making by individual economic units in the output and input markets, under perfect and imperfect market conditions. Externalities and role of government.

**Econ 3202s. Macroeconomic Theory.** (SS; 4 cr; QP–1102, Math 1140; SP–1101, Math 1021 or #)

The theory of national income determination; inflation, unemployment, and economic growth in alternative models of the national economy.

**Hist 3700. Variable Topics in the History of Women.**

(See specific topics for general education categories; 4 cr; repeatable when topic changes; QP–1101 or 1102 or 1201; SP–1001 or 1002 or 1201 and Wst 1101)

Possible topics include a historical study of women and religion, a historical study of thought about American women, a cross-cultural study of the history of women.

**Hist 3701s. Women and Religion: A History.** (SS; 4 cr; QP–1101 or 1102 or 1201; SP–1001 or 1002 or 1201 and Wst 1101)

A historical discussion of women in non-Western and Western religions.

**IS 4101s. Introduction to Professional Conduct Codes, Legal Constraints, and Ethics in the Human Services.**

(Env; 2 cr; QP–20 or 3xxx human services courses [see LAHS listing] or #; SP–jr, 10 cr or 3xxx or 4xxx human services courses or #)

Concepts of professional ethics in human services professions; ethically relevant legal mandates and constraints on professional practice; practical problems in the application of ethical principles.

**Mgmt 2201f. Principles of Management.** (SS; 4 cr; QP–1211, Econ 1101; SP–2101, Econ 1101 or #)

Discussion of the basic functions of management: planning, organizing, controlling, decision making, evaluation. Emphasis on the human factor in management, including job performance, motivation, leadership, and communication systems. Discussion of ethics, the changing environment of business, and organizational structure. Foundation for more specialized courses in management science, marketing, financial management, and human resources.

**Mgmt 3000. Variable Topics in Management.** (See specific topics for general education categories; 2 cr; repeatable when topic changes; QP–1211; SP–not offered when feasible)

Topic to be announced.

**Mgmt 3151s. Human Resources Management I.** (E/CR; 2 cr; QP–1212; SP–2201 or #; not offered 2000-2001)

Topics in human resource management; legal issues, planning, recruitment, selection, and training.

**Mgmt 3152s. Human Resources Management II.** (HDiv; 2 cr; QP–1212; SP–2201 or #; not offered 2000-2001)

Topics in human resource management: evaluating employee performance, compensation and benefits, safety, labor relations, international human resource management.
Psy 1061f,w. Introduction to the Development of the Child and Adolescent. (SS; 4 cr)
Theory, data, and research approaches in development from birth through adolescence. Prenatal and physical development as well as perceptual, cognitive, language, personality, and social development. Multicultural/global perspective. Does not count for elective credit for the 16-credit psychology component of the LAHS major or for the psychology major or minor.

Psy 1071f. Human Sexuality. (SS; 4 cr)
Survey of aspects of human sexuality, including intimacy and communication; male and female anatomy, physiology, and response; development of identity, sex role, and gender orientation; varieties of sexual expression; pregnancy and childbirth; contraception and disease prevention; sexual coercion and abuse; sexual dysfunctions and their treatment.

Psy 1081s. Drugs and Human Behavior. (SS; 2 cr)
Survey of psychoactive drugs, their effects on mind and behavior, and prevention and treatment of drug abuse.

Psy 3051s. The Psychology of Women. (HDiv; 4 cr; not offered 1999-2000)
Feminist approach to the psychological study of women’s personality, behavior, development, language issues, motivation, work and family lives, sexuality, health and psychobiology, adjustment and therapy, and victimization experiences. Focuses on women of color, feminist research methodology, and feminist analysis of psychological theories of women.

Psy 3101f. Learning Theory and Behavior Modification. (SS; 4 cr; QP–1203; SP–1101, 1102)
Major theories of learning and their importance for understanding human and nonhuman behavior. Classical and operant conditioning, generalization, discrimination, stimulus control, animal cognition. Behavior modification theories and techniques and their application to clinical populations. Lab projects demonstrate learning and behavior modification theories, concepts, and techniques and illustrate research methods and theory testing. Includes lab.

Psy 3112s. Cognition II. (SS; 4 cr; QP–1203, Math 1150 or Math 3605; SP–1101, Math 1601 or Math 2601 or #)
Empirical study of memory, language behaviors, representation of knowledge, judgment, decision making, problem solving, and creative thinking. Includes lab.

Psy 3211s. Biological Psychology. (Sci-L; 5 cr; QP–1203 or Biol 1114 or #SP–1101, 1102)
Brain organization and function; an emphasis on an understanding of the neural processes that underlie human and nonhuman behavior. Incorporates information from psychology, neuroscience, endocrinology, physiology, chemistry, neurology, and zoology to investigate the physiological basis of behavior. Topics include sensory processes, drugs and addiction, biological rhythms, sexual differentiation, reproduction, methods in neuroscience, neuropsychological disorders, and clinical assessment. Lab projects focus on neuroanatomical organization and function of the brain. (4 hrs lect, 1 hr lab)

Exploration of proximate and ultimate influences on female behavior in human and nonhuman species. Sexual differentiation, gender differences in cognition, biological basis of sexual orientation, female sexual selection, and dominance.

Psy 3301f. Personality I: Dimensions and Assessment. (SS; 2 cr; QP–1201, 1202, Math 1150 or Math 3605; SP–1051 or 1101-1102, Math 1601 or Math 2601)
Nature of personality constructs and theories. Nature and measurement of personal traits; their dimensional structure, stability, development, and heritability.

Psy 3311f. Personality II and Psychopathology I. (SS; 2 cr; QP–1201, 1202, Math 1150 or Math 3605; SP–3301)
Nature and interaction of conscious and nonconscious cognitive processing, emotion, and motivation; relation to anxiety-based, affective, substance-use, and personality disorders.

Psy 3312s. Psychopathology II. (SS; 2 cr; QP–3400; SP–3311)
Major psychotonic and organic psychological disorders and their treatment, including major affective disorders, schizophrenia, and major childhood disorders.

Psy 3401f. Developmental Psychology I: Child Psychology. (SS; 4 cr; QP–1201; SP–1051 or 1101-1102)
Theory, data, and research in development from conception to adolescence. Prenatal and physical development as well as perceptual, cognitive, personality, and social development. Language acquisition and Piaget’s theory of cognitive development.

Psy 3402s. Developmental Psychology II: Adolescence. (SS; 2 cr; QP–1201, 1350 or 1350; SP–1051 or 1101-1102, 3401 or 1061)
Theory, data, and research in adolescent development with emphasis on physical, cognitive, and social development.

Psy 3403s. Developmental Psychology III: Adulthood, Aging, and Death. (SS; 2 cr; QP–1201; SP–1051 or 1101-1102)
Theory, data, and research concerning the age group from young adulthood to old age. Emphasis on physical, cognitive, and social changes.

Psy 3501f. Social Psychology. (SS; 4 cr; QP–1201, 1202 or Soc 1100 or # QP–1051 or 1102 or Soc 1101 or #)
Theories and research in the study of interpersonal behavior. Role, self, social learning, exchange, person perception, cognitive consistency, and interpersonal transactions.

Psy 3511s. Applied Social Psychology. (SS; 2 cr; QP–3525 or #; SP–3501 or #)
A specific topic among applied social psychology fields (e.g., health psychology, psychology of law, environmental psychology) will be explored. Emphasis will be placed on the use of theories and techniques learned in Psy 3501 for the purpose of understanding social issues and/or affecting change. Topics will be announced prior to registration.

Psy 4101f.s. Helping Relationships. (SS; 4 cr; QP–3400; SP–3311)
Approaches to counseling and psychotherapy. Theories of helping relationships. Acquisition of helping skills, including attending behavior, reflection of feeling, paraphrasing, confrontation, and summarization. Major humanistic, cognitive, and behavioral approaches. Didactic instruction, observation of counseling and psychotherapeutic techniques, and practical experiences.

Psy 4630f. Empirical Investigations in Personality, Psychopathology, and Psychological Intervention. (SS; 4 cr; repeatable; QP–3400; SP–3311)
Empirical investigations in human emotion, motivation, individual differences, psychopathology, and psychological intervention. Includes lab.
Theoretical and empirical issues recurring in the sociological literature on deviant behavior.

Soc 3200s. Variable Topics in Social Stratification. (HDiv; 4 cr; repeatable when topic changes; QP-1100 or Anth 1110; SP-1101 or Anth 111; not offered 1999-2000)
Hierarchies of power, wealth, and prestige; analysis of various theories of stratification. Class, status, race, minorities (e.g., African Americans, American Indians), caste, and gender evaluated in terms of stratification.

Soc 3250f.s. Variable Topics in Social Structure. (See specific topics for general education categories; 4 cr; repeatable when topic changes; QP-1100 or Anth 1110; SP-1101 or Anth 1111)
In-depth study of one topic in sociology such as African American social institutions, the economic and social elite, bureaucracy, urban communities, social control, population, and demography.

Soc 3251f. African Americans. (HDiv; 4 cr; QP-1100 or Anth 1110; SP-1101 or Anth 1111)
Soc 3252s. Women in Muslim Society. (IP; 4 cr; QP-1100 or Anth 1110; SP-1101 or Anth 1111)

Soc 3300s. Variable Topics in Area Studies. (IP; 4 cr; repeatable when topic changes; QP-1100 or Anth 1110; SP-1101 or Anth 1111; not offered 2000-2001)
Same as Anth 3300. In-depth study of societies and cultures (values, religions, politics, economic institutions, kinship, family organization) of a particular part of the world, e.g., Africa, India and South Asia, China, Pacific Islands.

Soc 3301s. India and South Asia. (IP; 4 cr; QP-1100 or Anth 1110; SP-1101 or Anth 1111; not offered 2000-2001)

Spch 1061f. Interpersonal Communication. (SS; 4 cr)
Studies of variables in dyadic communication to create understanding of the student’s own communication patterns.

Spch 1071f. Introduction to Groups: Principles and Practices. (SS; 4 cr)
Group theory and directed practice in a variety of group situations, e.g., panels, symposia, and forums.

Spch 3401f. Human Communication Theory. (SS; 4 cr; QP-1100 or SP-2101 or #)
Perspectives on human communication, including the mechanistic, psychological, symbolic interactionist, and pragmatic. Focuses on approaches to social interaction. Provides general foundation and historical background of communication theory.

Spch 3411f. Intercultural Communication Theory and Research. (HDiv; 4 cr; QP-1101 or #; SP-2101 or #)
Study of intercultural communication from an interpersonal and group perspective. Includes qualitative and quantitative methods.

Spch 3421s. Organizational Communication Theory and Research. (SS; 4 cr; QP-1101 or #; SP-2101 or #)
Study of organizational communication, including small group perspectives. Includes qualitative and quantitative methods.

WSS 1051f.s. Fitness for Life. (2 cr; S-N only)
Factors associated with a positive lifestyle, assessment of each individual’s current wellness status, and development of a personal lifetime program for improving one’s quality of life.
Management (Mgmt)

This discipline is in the Division of the Social Sciences. It offers a liberal arts-based program of studies that allows students to enter the field of management as a professional or proceed to further studies at the graduate level.

Objectives—Management students:
1. understand and use a variety of techniques to manage financial, human, and material resources
2. are able to critically conceptualize business problems and to develop appropriate strategies for problem solving
3. understand and use a variety of quantitative analysis techniques appropriate for business
4. develop collaborative skills
5. be competent in written and oral communication
6. develop competence in computer skills
7. are prepared for professional careers in business or public service, or for graduate studies
8. are able to see relationships among the subfields of management (finance, human resources, marketing) and other liberal arts disciplines

Admission to the Major

The Division of the Social Sciences limits the number of students admitted to the management major. UMM and transfer students must apply to the Management Admissions Committee. Further details may be obtained from the office of the Division of the Social Sciences.

Major Requirements

Mgmt 2101-2102—Principles of Accounting I-II
Mgmt 2201—Principles of Management
Mgmt 3101—Financial Management
Mgmt 3201—Marketing Principles and Strategy
Mgmt 3301—Management Science
Econ 1101—Principles of Economics
Math 1021—Survey of Calculus
Math 1601—Introduction to Statistics
Srch 1051—Introduction to Public Speaking
8 additional credits in Mgmt courses at the 3xxx level or above
8 additional credits in Mgmt or Econ courses at the 3xxx level or above, or Phil 3111—Professional Ethics

Grades of D in Mgmt 2101-2102, Mgmt 2201, Econ 1101, or Math 1601 may not be used to meet major requirements. Required courses may not be taken S-N unless offered S-N only.

Note: Students should complete Mgmt 2101-2102, Econ 1101, Math 1021, and Math 1601 or their equivalents during their first two years. Prospective majors should see a management faculty member before registering for classes. Consultation with an adviser is essential to program planning.

Minor Requirements

Mgmt 2101-2102—Principles of Accounting I-II
Mgmt 2201—Principles of Management
Econ 1101—Principles of Economics
Math 1601—Introduction to Statistics
6 additional credits in Mgmt courses at the 3xxx level or above

Grades of D in Mgmt 2101-2102, Mgmt 2201, Econ 1101, or Math 1601 may not be used to meet minor requirements. Required courses may not be taken S-N unless offered S-N only.

Course Descriptions

Mgmt 2101f. Principles of Accounting I. (4 cr)
An introductory course in accounting principles and practices. The students will develop an understanding of both the conceptual and procedural framework of the accounting processes. Emphasis will be placed on the preparation and communication of accounting information and the financial statements for a proprietorship.

Mgmt 2102s. Principles of Accounting II. (4 cr; QP-1211; SP-2101)
A continuation of Principles of Accounting I. Students will develop an understanding of the issues unique to partnerships, corporations, and organizational financing. Cash flow statements and performance analysis will also be emphasized.

Mgmt 2201f. Principles of Management. (SS; 4 cr; QP-1211, Econ 1101, SP-2101, Econ 1101 or #)
Discussion of the basic functions of management: planning, organizing, controlling, decision making, evaluation. Emphasis on the human factor in management, including job performance, motivation, leadership, and communication systems. Discussion of ethics, the changing environment of business, and organizational structure. Foundation for more specialized courses in management science, marketing, financial management, and human resources.

Mgmt 3000. Variable Topics in Management. (See specific topics for general education categories; 2 cr; repeatable when topic changes; QP-1211; SP-varies by topic; offered when feasible)
Topic to be announced.

Mgmt 3101f. Financial Management. (SS; 4 cr; QP-1212, Econ 1101, SP-2102, Econ 1101, Math 1601)
Financial analysis, theory and practice, financial leverage, capital budgeting, cost of capital, dividend policy, capital market theory, and working capital management.

Mgmt 3111s Investment and Portfolio Analysis I. (SS; 2 cr; QP-3200; SP-3101 or #)
Economic and investment environment as it relates to security investment decisions; appraisal of investment characteristics; introductory investment analysis of
Management

various stocks and bonds; determination of investment objectives and execution of portfolio policies for various types of individual institutional investors.

Mgmt 3112s. Investment and Portfolio Analysis II. (SS; 2 cr; QP–3200; SP–3111; not offered 1999-2000)
Topics include investments in a global market and derivative markets; analysis of industry and company; study of efficient market theory.

Mgmt 3121s. Managerial Economics I. (SS; 2 cr; QP–Econ 1101, Math 1140; SP–Econ 1101, Math 1021; not offered 1999-2000)
Demand analysis and forecasting, technological change, strategic behavior, industrial innovation, market structure and pricing.

Mgmt 3122s. Managerial Economics II. (SS; 2 cr; QP–Econ 1101, Math 1150; SP–Econ 1101, Math 1601; not offered 1999-2000)
Risk and capital budgeting, government and business, global economy, public management (cost-benefit analysis, economic growth policy, and trade policy), and linear programming.

Mgmt 3131f. Managerial Accounting I. (2 cr; QP–1212; SP–2102; not offered 2000-2001)
The study of managerial accounting principles using accounting data for planning, controlling, and decision-making activities. The students will develop an understanding of various cost behaviors, product costing activities, and cost-volume-profit relationships.

Mgmt 3132f. Managerial Accounting II. (2 cr; QP–3213; SP–3131; not offered 2000-2001)
A continuation of Managerial Accounting I. The students will develop an understanding of profit planning and performance measurements. Determining relevant costs in various management decisions and capital budgeting issues will also be studied.

Mgmt 3141. Business Law I. (SS; 2 cr; QP–1212; SP–2201; offered when feasible)
Law as it relates to the commercial world, including the legal environment, federal regulation, contracts, agency, sales.

Mgmt 3142. Business Law II. (SS; 2 cr; QP–3251; SP–2201; offered when feasible)
Law as it relates to the commercial world, including the legal environment, commercial paper, corporations, and secured transactions.

Mgmt 3151s. Human Resources Management I. (E/CR; 2 cr; QP–1212; SP–2201 or #; not offered 2000-2001)
Topics in human resource management: legal issues, planning, recruitment, selection, and training.

Mgmt 3152s. Human Resources Management II. (HDiv; 2 cr; QP–1212; SP–2201 or #; not offered 2000-2001)
Topics in human resource management: evaluating employee performance, compensation and benefits, safety, labor relations, international human resource management.

Mgmt 3161f. Labor Management Relations I. (E/CR; 2 cr; QP–Econ 1101; SP–Econ 1101 or #; not offered 1999-2000)
Historical development of labor relations and the legal framework governing collective bargaining. Labor relations law reform. Case studies from labor relations law.

Mgmt 3162f. Labor Management Relations II. (SS; 2 cr; QP–3225; SP–3161 or #; not offered 1999-2000)
Labor-management negotiation, grievances, wages and economic security plans, public policies toward collective bargaining. Case studies from labor arbitration.

Mgmt 3201f. Marketing Principles and Strategy. (SS; 4 cr; QP–1212, 3200, Math 1150; SP–2102, 2201, Math 1601 or #)
Basic factors affecting policy and strategy issues in marketing. Economic, legal, behavioral, environmental, competitive, and technological factors as they affect product, pricing, promotion, and marketing-channel decisions.

Mgmt 3301s. Management Science. (M/SR; 4 cr; QP–1212, 3220, Math 1150; SP–2102, 2201, Math 1601; offered when feasible)
Application of quantitative methods to decision making in business. Topics may include linear programming, forecasting and other probabilistic techniques, inventory management, network models, project management, decision theory, transportation and assignment models, simulation, Markov analysis, integer programming, Monte Carlo simulation.

Mgmt 3401s. Organizational Behavior. (SS; 2 cr; QP–3220, Math 1150; SP–2201, Math 1601; not offered 1999-2000)
Theories and applications of individual, group, and organizational behavior, including motivation, communication, decision making, group dynamics, power, and leadership. Case analyses and experiential exercises are tools for application of theory.

Mgmt 3501f.s. Applied Deterministic Modeling for Management Science. (2 cr; QP–1212, 3220, Math 1150 or Math 3605; SP–2102, 2201, Math 1021 or Math 1101 or Math 1601 or Math 2601 or #)
Same as Math 3501. Formulations of real-world problems as Linear Programming or Integer Linear Programming models; graphical solutions of some LP models. Linear Programming: the Simplex method, intuitive ideas behind the Simplex method. Using software to solve LP problems; interpreting optimal solutions; sensitivity analysis; duality. Network diagram representation; critical path method (CPM-PERT); transportation problem.

Mgmt 3502f.s. Applied Probabilistic Modeling for Management Science. (2 cr; QP–1212, 3220, Math 1150 or Math 3605; SP–2102, 2201, Math 1021 or Math 1101 or Math 1601 or Math 2601 or #)
Same as Math 3502. Short review of probability and statistics; mean and variance of a data set; discrete and continuous random variables (especially the Exponential distribution and the Poisson distribution). Decision and game theory. Decision trees, types of decision criteria. Queueing models, birth-and-death processes; Markovian or Poisson arrivals and exponential service times; M/M/k and M/M/$\infty$ queues; Statistical Quality Control; inventory control system.

Mgmt 4896. Internship. (1-4 cr; repeatable to 4 cr; 2 cr may be applied toward major or minor; QP–1212; SP–2201)
Placement in an environment providing educational experience and field application relevant to student’s major. Written analysis of the background, structure, and policy issues in the sponsoring organization required.
Division Structure and Course Descriptions

Mgmt 4900f,s. Variable Topics in Management Research. (See specific topics for general education categories; 2 cr; repeatable when topic changes; QP–1212, 3220; SP–2102, 2201)
Guided research sessions. Familiarize students with the literature in the field. Research topics include case studies of international or national topics within the discipline.

Mgmt 4901f. Organizational Behavior. (2 cr; QP–1212, 3220; SP–2102, 2201)

Mgmt 4902f. Industrial Relations. (2 cr; QP–1212, 3220; SP–2102, 2201; offered when feasible)

Mgmt 1993f,s, 2993f,s, 3993f,s, 4993f,s. Directed Study. (1-5 cr; repeatable; prereq #)

Mgmt 4994f,s. Senior Honors Project. (1-5 cr; repeatable; prereq participation in Honors Program, #)
A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

Mathematics (Math)

This discipline is in the Division of Science and Mathematics.

Objectives—The mission of the discipline is to advance knowledge of mathematics and statistics: by teaching mathematics/statistics and their processes, by research in mathematics/statistics and mathematical/statistical pedagogy, and by dissemination of this knowledge to students and the community we serve.

Historically, the study of mathematics has been central to a liberal arts education. The mathematics/statistics curriculum serves as an integral part of students’ active pursuit of a liberal arts education. The discipline’s mission concentrates on the three main components of the institutional mission, namely, teaching, research, and outreach. The mathematics/statistics program serves students who major or minor in mathematics, seek secondary mathematics teaching licensure, major or minor in programs that require a mathematical background, or wish to fulfill components of a general education. The mathematics faculty provide guidance to students who choose to design their own major/minor. The discipline’s mission includes dissemination of mathematical knowledge to the community.

The mathematics and statistics curriculum is designed to help students develop competence in mathematical and statistical techniques and methods. It aims to sharpen the students’ mathematical intuition and abstract reasoning as well as their reasoning from numerical data. It also encourages and stimulates the type of independent thinking required for research beyond the confines of the textbook. The mathematics program aims to provide students with the basic knowledge and skills to make mathematical contributions to modern society, whether in the form of pure mathematics or of mathematics applied in other disciplines. The program seeks to enable students to see and communicate how the development of mathematics has been part of the development of several civilizations and is intimately interwoven with the cultural and scientific development of these societies. The statistics program aims to provide an effective operational knowledge of the theory and methods of statistics and the application of the statistical methods in a liberal arts environment. It seeks to enhance students’ critical thinking in domains involving judgments based on data. The curriculum prepares students to enter graduate school, pursue careers in applied mathematics or statistical fields, or teach mathematics and statistics.

The discipline uses various assessment methods and tools to evaluate and improve student academic achievement in mathematics/statistics. The results of the assessment help the discipline to shape a curriculum that is responsive to student needs. The Mathematics Major/Minor Student Portfolio is the major assessment tool used by the discipline. It includes characteristics of the entering student, documents related to the learning development of the student during his or her stay at UMM, and post-graduation information. Some other assessment methods and tools include proficiency tests in basic skills courses, performance in course projects, and specially designed exams in some courses. Graduates of the program are surveyed regularly to assess discipline objectives.

Major Requirements
Math 1101-1102—Calculus I-II
Math 2111—Linear Algebra
Math 2201—Pure Mathematics I
Math 2611—Mathematical Statistics
Math 3201—Pure Mathematics II
Math 4901—Senior Seminar
one course numbered Math x4xx
a minimum of 9 additional credits in Math courses at the 2xxx level or above

Students also are required to take a course with significant mathematical applications outside the mathematics discipline. This course must be approved by the mathematics discipline

No required courses may be taken S-N. Up to 6 credits of coursework with a grade of D may be used to meet the major requirements if offset by an equivalent number of credits of A or B.
Majors should begin with Math 1011—Pre-Calculus or Math 1101—Calculus I. Students with questions about placement are encouraged to discuss them with members of the mathematics faculty. Students planning to pursue graduate work in mathematics should complete:

- Math 4201—Complex Analysis
- Math 4211—Real Analysis
- Math 4221—Topology
- Math 4231—Abstract Algebra
- Math 4241—Number Theory

The recommended electives for students planning to work or pursue graduate work in applied mathematics are:

- Math 2401—Differential Equations
- Math 3401—Operations Research
- Math 3411—Discrete and Combinatorial Mathematics
- Math 4401—Numerical Methods with Applications in Mathematical Modeling
- Math 4450—Variable Topics in Applied Mathematics

Students planning to work or pursue graduate work in statistics are advised to complete some electives from:

- Math 2611—Mathematical Statistics
- Math 3601—Data Analysis
- Math 3611—Multivariate Statistical Analysis
- Math 4601—Biostatistics
- Math 4650—Variable Topics in Statistics

Students interested in statistics can design an area of concentration in consultation with the statistics faculty. It is suggested that the designed academic program in statistics include:

- Math 2611—Mathematical Statistics
- Math 3601—Data Analysis
- Math 3611—Multivariate Statistical Analysis
- Math 4601—Biostatistics
- Math 4650—Variable Topics in Statistics

Students designing their area of concentration in statistics are encouraged to take related courses in either the physical and natural sciences or the social sciences. These related courses must be approved by the applied mathematics faculty.

**Minor Requirements**

- Math 1101-1102—Calculus I-II
- Math 2111—Linear Algebra

A minimum of 12 additional credits in Math courses at the 2xxx level or above in at least two of the following numbering systems x2xx, x4xx, x5xx, x6xx

Required courses may be taken S-N, but it is not recommended. Up to 6 credits of coursework with a grade of D may be used to meet the minor requirements if offset by an equivalent number of credits of A or B.

**Teacher Preparation Requirements**

Students interested in teaching licensure in mathematics must complete the following requirements:

- a mathematics major including:
  - Math 2211—History of Mathematics
  - Math 3211—Geometry
  - Math 3411—Discrete and Combinatorial Mathematics

- a course on computer programming

- required professional education courses, including methods (MthE 4103—Methods of Teaching Mathematics in the Secondary School) and student teaching in mathematics

**A teaching licensure minor in mathematics requires a minor in mathematics including:**

- Math 2201—Pure Mathematics I

- a course on computer programming

- required professional education courses, including methods (MthE 4103—Methods of Teaching Mathematics in the Secondary School) and student teaching in mathematics

Required courses may not be taken S-N unless offered S-N only.

**Course Descriptions**

**Math 0901f. Basic Algebra.** (0 cr toward graduation, 4 cr toward financial aid)

Sets, absolute values, linear equations and inequalities, functions and graphs, arithmetic of complex numbers, quadratics, radicals, exponents and logarithms, and linear systems of equations.

**Math 1001s. Survey of Math.** (M/SR; 4 cr; prereq 2 yrs high school math)

Introductory topics in mathematics, such as number system, geometry, algebra, discrete mathematics,
Division Structure and Course Descriptions

statistics, logic, and the history of mathematics, including applications in today’s world.

Math 1011f,s. Pre-Calculus. (4 cr; prerequisite high school higher algebra, geometry) Polynomial, rational, exponential, logarithmic, and trigonometric functions; trigonometric identities and equations; polar coordinates and topics from analytic geometry; systems of equations, determinants, and matrices; arithmetic, geometric, and simple infinite series; binomial theorem.

Math 1021f. Survey of Calculus. (4 cr; prerequisite 1112, higher school higher algebra or #, or SP-1011) Short course for students in social sciences, biological sciences, and other areas requiring a minimal amount of calculus. Topics include basic concepts of functions, derivatives and integrals, exponential and logarithmic functions, maxima and minima, partial derivatives; applications.

Math 1101f,s. Calculus I. (M/SR; 5 cr; prerequisite high school higher algebra or #, or SP-high school higher algebra, geometry, trigonometry or 1011) The concepts, properties, and some techniques of differentiation, antidifferentiation, and definite integration and their connection by the Fundamental Theorem. Partial differentiation. Some applications.

Math 1102f,s. Calculus II. (M/SR; 5 cr; prerequisite 1202; prerequisite SP-1101) Further applications involving mathematical modeling and solution of simple differential equations. Taylor’s Theorem. Limits of sequences. Use and theory of convergence of power series.

Math 1601f,s. Introduction to Statistics. (M/SR; 4 cr; prerequisite high school higher algebra) Scope, nature, tools, language, and interpretation of elementary statistics. Descriptive statistics; graphical and numerical representation of information; measures of location, dispersion, position, and dependence; exploratory data analysis. Elementary probability theory, discrete and continuous probability models. Inferential statistics, point and interval estimation, tests of statistical hypotheses. Inferences involving one and two populations, ANOVA, regression analysis, and chi-squared tests; use of statistical computer packages.

Math 2101f,s. Calculus III. (M/SR; 4 cr; prerequisite 1203 or #, or SP-1102 or #) Multivariable and vector calculus. Three-dimensional analytic geometry; partial differentiation; multiple integration; gradient, divergence, and curl; line and surface integrals; divergence theorem; Green and Stokes theorems; applications.

Math 2111f,s. Linear Algebra. (M/SR; 4 cr; prerequisite 1203 or #, or SP-1101 or #) Matrix algebra, systems of linear equations, finite dimensional vector spaces, linear transformations, determinants, inner-product spaces, characteristic values and polynomials, eigenspaces, minimal polynomials, diagonalization of matrices, related topics; applications.

Math 2201f. Pure Mathematics I. (M/SR; 4 cr; prerequisite 1203 or #, or SP-1102 or #) Survey of some abstract mathematical ideas. Basic set foundations, including relations, equivalence relations, and functions; emphasis on correct writing of mathematical proofs and text. Construction of natural numbers, integers, and rational number systems. Introduction to number theory and algebra: Euclidean algorithm for integers, polynomials, and Gaussian integers. Modular arithmetic with integers and polynomials, Fermat’s Little Theorem. Analysis: convergence of sequences and series; application to definition of complex functions. Cauchy-Riemann equations.

Math 2211f. History of Mathematics. (4 cr; prerequisite course above 1100 or #, or not offered 1999-2000) Historical development of various areas in mathematics and important figures in mathematics from ancient to modern times.

Math 2401f. Differential Equations. (M/SR; 4 cr; prerequisite 1203 or #, or SP-1102 or #) First-order and second-order differential equations with methods of solution and applications. Systems of equations, series solutions, existence and uniqueness theorems, numerical solutions of first-order equations; the qualitative theory of differential equations.

Math 2501f. Probability and Stochastic Processes. (M/SR; 4 cr; prerequisite 1202 or #, or SP-1101 or #) Probability theory; set theory, axiomatic foundations, conditional probability and independence, Bayes’ rule, random variables. Transformations and expectations; expected values, moments, and moment generating functions. Common families of distributions; discrete and continuous distributions. Multiple random variables; joint and marginal distributions, conditional distributions and independence, covariance and correlation, multivariate distributions. Properties of random sample and central limit theorem. Markov chains, birth and death processes, and queuing theory.

Math 2601f. Statistical Methods. (M/SR; 4 cr; prerequisite 1140, 1202 or #, or SP-1101 or 1021) Descriptive statistics, elementary probability theory; laws of probability, random variables, discrete and continuous probability models, functions of random variables, mathematical expectation. Statistical inference: point estimation, interval estimation, tests of hypotheses. Other statistical methods: linear regression and correlation, ANOVA, nonparametric statistics, statistical quality control, use of statistical computer packages.

Math 2611s. Mathematical Statistics. (M/SR; 4 cr; prerequisite 3610 or #, or SP-1101) Introduction to probability theory. Principles of data reduction; sufficiency principle. Point estimation; methods of finding and evaluating estimators. Hypothesis testing; methods of finding and evaluating tests. Interval estimation; methods of finding and evaluating interval estimators. Linear regression and ANOVA.

Math 3201s. Pure Mathematics II. (M/SR; 4 cr; prerequisite 2201 or equivalent) Algebra: Euclidean, principal ideal, and unique factorization domains; rings, ideals, quotient rings, and ring homomorphisms; groups, normal subgroups, quotient groups, and group homomorphisms. Analysis: construction of the real number system, completeness; uniform continuity of functions, uniform convergence of sequences of functions; metrics, neighborhoods, compactness. Complex analysis: geometry of complex functions. Geometry: algebraic surfaces and ideals. Transformation groups that preserve a metric. The emphasis will be on rigor and axiomatic development.

Math 3211f. Geometry. (M/SR; 4 cr; prerequisite 1202 or #, or SP-1200 or SP-Math course above 1100; or not offered 2000-2001) Analytic approach to Euclidean and non-Euclidean geometries. Selected topics from affine, hyperbolic, spherical, projective geometries. Examples are featured.
Possible comparisons of analytic and synthetic approaches. May include other related topics.

Math 3401. Operations Research. (M/SR; 4 cr; QP–1140, 1202 or #; SP–1100 or higher or #)
Topics include, but are not limited to, linear and integer linear programming formulations, sensitivity analysis and duality, network models and applications.

Math 3411. Discrete and Combinatorial Mathematics. (M/SR; 4 cr; QP–#; SP–1100 or higher or #)
Propositional logic; equivalence relations; recurrence equations; structures and properties of undirected and directed graphs; applications of the aforementioned topics.

Math 3501. Applied Deterministic Modeling for Management Science. (2 cr; QP–1150 or 3605, Mgmt 1212, Mgmt 3220; SP–1021 or 1101 or 1601 or 2601, Mgmt 2102, Mgmt 2201 or #)
Same as Mgmt 3501. Formulations of real-world problems as Linear Programming or Integer Linear Programming models; graphical solutions of some I.P. models. Linear Programming: the Simplex method, intuitive ideas behind the Simplex method. Using software to solve LP problems; interpreting optimal solutions; sensitivity analysis; duality. Network diagram representation; critical path method (CPM-PERT); transportation problem.

Math 3502. Applied Probabilistic Modeling for Management Science. (2 cr; QP–1150 or 3605, Mgmt 1212, Mgmt 3220; SP–1021 or 1101 or 1601 or 2601, Mgmt 2102, Mgmt 2201 or #)
Same as Mgmt 3502. Short review of probability and statistics; mean and variance of a data set; discrete and continuous random variables (especially the exponential distribution and the Poisson distribution). Decision and game theory. Decision trees, types of decision criteria. Queueing models, birth-and-death processes; Markovian or Poisson arrivals and exponential service times; M/M/k and M/M/8 queues; Statistical Quality Control; inventory control system.

Math 3601. Data Analysis. (M/SR; 4 cr; QP–1150, 3605, 3611 or #; SP–1601 or 2601 or 2611 or #)
Nature and objectives of statistical data analysis, exploratory and confirmatory data analysis techniques. Some types of statistical procedures; formulation of models, examination of the adequacy of the models. Some special models; simple regression, correlation analysis, multiple regression analysis, analysis of variance, use of statistical computer packages.

Math 3611. Multivariate Statistical Analysis. (M/SR; 4 cr; QP–1150, 3605, 3611 or #; SP–1601 or 2601 or 2611 or #)
Analysis of categorical data. Loglinear models for two- and higher-dimensional contingency tables. Logistic regression models. Aspects of multivariate analysis, random vectors, sample geometry and random sampling, multivariate normal distribution, inferences about the random vectors, sample geometry and random sampling, regression models. Aspects of multivariate analysis, and higher-dimensional contingency tables. Logistic Analysis of categorical data. Loglinear models for two-

Math 3621. Complex Analysis. (M/SR; 2 cr; QP–3202 or #; SP–2201 or equiv; not offered 2000-2001)
Differentiable and analytic functions of a complex variable. Contour integral theorems. Laurent expansions. Other topics optional.

Math 4211. Real Analysis. (M/SR; 2 cr; QP–3410 or #; SP–3201 or equiv; not offered 2000-2001)
The extension of the theory of integration to other forms of integrals. Metric spaces and functions defined on these. Other optional topics.

Math 4221. Topology. (M/SR; 2 cr; QP–3250, 3202 or #; SP–3201 or equiv; not offered 1999-2000)
Selected topics from point set topology and/or algebraic topology.

Math 4231. Abstract Algebra. (M/SR; 2 cr; QP–3310 or #; SP–3201 or equiv; not offered 2000-2001)
Selected topics from the theory of finite groups, Galois theory of fields, and/or the theory of rings.

Math 4241. Number Theory. (M/SR; 2 cr; QP–3250 or #; SP–2201 or equiv; not offered 1999-2000)
Selected topics from modular congruences, theory of primes, classical Diophantine equations, and the connections with algebraic curves.

Math 4250. Variable Topics in Pure Mathematics. (M/SR; 2 cr; repeatable when topic changes; SP–3201 or equiv; offered when feasible)
Treatment of an advanced pure mathematics topic not included in the regular curriculum.

Math 4401. Numerical Methods With Applications in Mathematical Modeling. (M/SR; 4 cr; QP–3203, 3300, CSci 1300 or #; SP–2111, 2401 or #; not offered 1999-2000)
Finite differences; interpolation; numerical integration; numerical solutions of differential, algebraic, and transcendental equations; continuous mathematical models.

Math 4450. Variable Topics in Applied Mathematics. (M/SR; 4 cr; repeatable when topic changes; prereq #; not offered 2000-2001)
Treatment of an advanced applied mathematics topic not included in the regular curriculum.

Math 4601. Biostatistics. (M/SR; 4 cr; QP–1150, 3605, 3611 or #; SP–1601 or 2601 or 2611 or not offered 2000-2001)
Design and analysis of biological studies: biological assays, case-control studies, randomized clinical trials, factorial designs, repeated measures designs, observational studies, and infectious disease data. Analysis of survival data: basic concepts in survival analysis, group comparisons, and Cox regression model. Use of statistical computer packages.

Math 4650. Variable Topics in Statistics. (M/SR; 4 cr; repeatable when topic changes; QP–1150, 3605, 3611 or #; SP–1601 or 2601 or 2611 or not offered 1999-2000)
Topics selected from nonparametric methods, linear and nonlinear regression analysis, ANOVA, design of experiments, sampling methods, time series analysis and statistical computing.

Math 4901. Senior Seminar. (M/SR; 0-1 cr; prereq sr)
This is a full-year course, required for all mathematics majors in their senior year. Students must attend year round and present one of the seminars.

Math 493f, 2993f, 3993f, 4993f. Directed Study. (1-5 cr; repeatable; prereq #)
A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”
Music (Mus)

This discipline is in the Division of the Humanities. The music curriculum offers a wide range of courses for the music major. It also has strong appeal to the general student, especially in the activities of the instrumental and vocal ensembles.

Objectives—Students become familiar with the traditions of Western and non-Western music through theoretical analysis, research, performance, and historical survey. The curriculum fosters the development of the critical ability necessary to understand those traditions. Students experience the unique relationship between research and performance in music. Theoretical and practical courses that provide a sound academic background in music are available for those who intend to pursue graduate study, teach, or fulfill general education requirements.

Major Requirements

7 enrollments in Mus 0100—Concert Attendance

Core Studies I
Mus 1101—Music Theory I
Mus 1102—Music Theory II
Mus 1103—Keyboard Proficiency Lab I
Mus 1104—Keyboard Proficiency Lab II

Core Studies II
Mus 2101—Advanced Music Theory III
Mus 2102—Advanced Music Theory IV
Mus 2103—Advanced Keyboard Proficiency Lab III
Mus 2104—Advanced Keyboard/Computer Proficiency Lab IV

Core Studies III
Mus 3101—Medieval, Renaissance, and Baroque Music
Mus 3102—Classical, Romantic, and 20th-Century Music
7 credits in Individual Performance Studies in the major area, of which a minimum of 2 semesters must be in the Mus 3200—Advanced Individual Performance Studies series
Mus 4901—Senior Project
6 additional credits in Mus courses at the 3xxx level or above

Courses with grades of D may not be used to meet the major requirements. Required courses may not be taken S-N except where noted.

Minor Requirements

20 credits including:

Core Studies I
Mus 1101—Music Theory I
Mus 1102—Music Theory II

and either:

Core Studies II
Mus 2101—Advanced Music Theory III
Mus 2102—Advanced Music Theory IV

Core Studies III
Mus 3101—Medieval, Renaissance, and Baroque Music
Mus 3102—Classical, Romantic, and 20th-Century Music

Courses with grades of D may not be used to meet the minor requirement. Required courses may not be taken S-N except where noted.

Teacher Preparation Requirements

Music majors must complete:
required professional secondary education courses, including methods:
MusE 4103—Methods of Teaching Music K-12
MusE 4104—Multicultural Music for the K-12 Music Educator
student teaching in music
Mus 3311—Conducting Techniques

Required courses may not be taken S-N unless offered S-N only.

These specializations are available:

Instrumental K-12
7 credits of Mus 1300—Concert Band
advanced performance ability on at least one instrument of either the wind or percussion family
secondary performance competence on one instrument of another family (wind or percussion)
Mus 3301—Instrumental Techniques: Woodwind
Mus 3302—Brass and Percussion
Mus 3303—Strings
Mus 3304—Vocal Techniques
Mus 3321—Instrumental Conducting and Materials

Vocal K-12
7 credits from Mus 1310—University Choir or Mus 1320—Concert Choir
advanced performance ability in voice
secondary performance competence on an instrument (wind, percussion, or keyboard)
Mus 3301—Instrumental Techniques: Woodwind
Mus 3302—Brass and Percussion
Mus 3303—Strings
Mus 3304—Vocal Techniques
Mus 3331—Choral Conducting and Materials

Course Descriptions

Mus 0100f,s. Concert Attendance. (0 cr; repeatable; S-N only)
Encourages concert attendance as an important aspect of learning about music—the literature, various media, performance practice, and related topics. Satisfactory completion is attendance at a minimum of 15 listed concert offerings each semester.
Mus 1041fs. Introduction to Music. (FA; 4 cr)
Survey emphasizing development of an intelligent understanding and appreciation of music. For non-music majors.

Mus 1042f. Fundamentals of Music. (FA; 4 cr)
Music treated as a performance language. Topics include music notation, melodic nuance, simple harmony and chord usage, simple aural recognition and singing, basic composition, and basic performance skills using electronic keyboards. Designed so that the general student can deal with primary issues in the study of music.

Mus 1043s. American Jazz Styles. (FA; 4 cr)
Development and analysis of the New Orleans dixieland, ragtime, stride, boogie-woogie, Chicago dixieland, swing, bop, cool, funky, progressive, third-stream, free form, and fusion jazz styles. Introductory course to help non-music majors to become familiar with and appreciate this art form.

Mus 1044f,s. Class Piano. (ArtP; 1 cr)
Introduction to piano performance for students with no previous piano training. Students will learn basic keyboard skills, including note reading, fingering, and counting. They will study beginning piano technique and will learn to perform elementary-level solos and ensembles.

Mus 1050f,s. Accompanying. (ArtP; 1 cr; repeatable to 8 cr; prereq #:S-N only)
Students who accompany private lessons and recitats may receive credit. Accompanying assignments are made through consultation with the piano faculty.

Mus 1070f,s. Instrumental Chamber Ensemble. (ArtP; 1 cr; repeatable to 8 cr; prereq #)
Performance of instrumental chamber music. Groups are formed according to the interests of students and availability of materials.

Mus 1080f,s. Jazz Combo. (ArtP; 1 cr; repeatable to 8 cr; prereq #)
Performance of instrumental jazz music with emphasis on improvisation.

Mus 1090f,s. Vocal Chamber Ensemble. (ArtP; 1 cr; repeatable to 8 cr; prereq #)
Performance of vocal ensemble music especially written for smaller groups.

Mus 1101f. Core Studies I: Music Theory I. (3.5 cr)
Mus 1102s. Core Studies I: Music Theory II. (3.5 cr; QP–1122–SP–1101)
Review of fundamentals; contrapuntal and harmonic techniques; develops effective analytical skills. A concurrent class in keyboard proficiency develops skills associated with music theory.

Mus 1103f. Core Studies I: Keyboard Proficiency Lab I. (1 cr; required for majors; recommended for nonmajors; S-N only)
This lab complements Music Theory I with the visual and aural reinforcement of theory concepts at the piano keyboard. Study includes piano score reading, playing by ear, harmonization, elementary transposition and modulation, and keyboard technique with focus on major keys.

Mus 1104s. Core Studies I: Keyboard Proficiency Lab II. (1 cr; QP–1128–SP–1103; required for majors; recommended for nonmajors; S-N only)
Students continue to develop reading and technical skills as they use the keyboard to visualize more complex theory fundamentals by working with pivot modulation, instrumental transposition, harmonization, improvisation, modes, and more advanced chord progressions.

Mus 1200-1219f,s. Individual Performance Studies. (ArtP; 1 cr per sem for each; repeatable to 8 cr; prereq #: special fee required)
Private instruction in the following areas is open to all students. It is recommended that music majors fulfill their requirement of 7 credits in successive enrollments in order to maintain continuous emphasis in the major performance area. The 3200 series is intended for music students who have achieved an advanced performance level. A jury examination in the major performance area is required to progress to the advanced performance series. The examination provides an effective check on the music student’s progress. All music majors and other students who anticipate applying for the jury exam should enroll under ABCD-N grading only. Note: Applied music instructors are not expected to make up sessions for unexcused absences from scheduled lessons.

Mus 1200. Piano
Mus 1201. Piano Accompanying
Mus 1202. Organ
Mus 1203. Harpsichord
Mus 1204. Voice
Mus 1205. Violin
Mus 1206. Viola
Mus 1207. Cello
Mus 1208. Double Bass
Mus 1209. Flute
Mus 1210. Oboe
Mus 1211. Clarinet
Mus 1212. Saxophone
Mus 1213. Bassoon
Mus 1214. Trumpet
Mus 1215. French Horn
Mus 1216. Trombone
Mus 1217. Baritone
Mus 1218. Tuba
Mus 1219. Percussion

Mus 1300f,s. Concert Band. (ArtP; 1 cr; repeatable to 8 cr; S-N only)
Rehearsals and concerts cover standard and contemporary band literature with emphasis on concert performance. Several concerts annually in addition to a spring concert tour.

Mus 1310f,s. University Choir. (ArtP; 1 cr; repeatable to 8 cr; prereq #: S-N only)
Preparation of choral works for at least one public concert each semester and other special events. Emphasis on basic choral singing techniques.

Mus 1320f,s. Concert Choir. (ArtP; 1 cr; repeatable to 8 cr; prereq #: S-N only)
Preparation of choral works from all major periods of music literature with emphasis on concert performance. Several public concerts and appearances scheduled each semester in addition to a spring concert tour.
Mus 1330f,s. Jazz Ensemble. (ArtP; 1 cr; repeatable to 8 cr; S-N only)
Rehearsals and concerts cover the literature for this medium.

Mus 2101f. Core Studies II: Music Theory III. (3.5 cr; QP–1123; SP–1102)

Mus 2102s. Core Studies II: Music Theory IV. (3.5 cr; QP–1132; SP–2101)
Continuation of Core Studies I, including harmonic, contrapuntal, and 20th-century techniques. Analysis of larger forms; works from all periods. A concurrent class in keyboard/computer proficiency develops skills associated with the study of music theory.

Mus 2103f. Core Studies II: Keyboard Proficiency Lab III. (1 cr; QP–1129; SP–1104; required for majors, recommended for nonmajors; S-N only)
Students improve skills in keyboard harmony, modulation, harmonization, instrumental transpositions, grand staff reading, open score reading, and improvisation.

Mus 2104s. Core Studies II: Keyboard/Computer Proficiency Lab IV. (1 cr; QP–1137; SP–2103; required for majors, recommended for nonmajors; S-N only)
MIDI systems sequencing in the computer music lab. Improvement of skills in keyboard harmony, modulation, harmonization, instrumental transpositions, grand staff reading, open score reading, and improvisation in the group keyboard lab.

Mus 3101f. Core Studies III: Medieval, Renaissance, and Baroque Music. (FA; 4 cr; QP–1123; SP–1102)
Historical development of Western music and representative literature of the various periods and styles.

Mus 3102s. Core Studies III: Classical, Romantic, and 20th-Century Music. (FA; 4 cr; QP–1123; SP–1102)
Historical development of Western music and representative literature of the various periods and styles.

Mus 3200-3219f,s. Advanced Individual Performance Studies. (ArtP; 1 cr per sem for each; repeatable to 8 cr; prereq successful completion of jury examination)
Private instruction in the major performance area for music students at an advanced level of performance. For listing of performance areas, see Mus 1200 above (excluding piano accompanying). Note: Applied music instructors are not expected to make up sessions for unexcused absences from scheduled lessons.

Mus 3301f. Instrumental Techniques—Woodwind. (1 cr; not offered 2000-2001)
Practical study to develop elementary skills as well as a basic teaching knowledge and understanding of performance problems of the woodwind instruments.

Mus 3302s. Instrumental Techniques—Brass and Percussion. (1 cr; not offered 2000-2001)
Practical study to develop elementary skills as well as a basic teaching knowledge and understanding of performance problems of the brass and percussion instruments.

Mus 3303f. Instrumental Techniques—Strings. (1 cr; not offered 2000-2001)
Practical study to develop elementary skills as well as a basic teaching knowledge and understanding of performance problems of the string instruments.

Mus 3304s. Vocal Techniques. (1 cr; not offered 2000-2001)
Practical study to develop elementary skills as well as a basic teaching knowledge and understanding of performance problems of the voice.

Mus 3311f. Conducting Techniques. (2 cr)
Instrumental and choral conducting skills.

Mus 3321s. Instrumental Conducting and Materials. (2 cr; QP–3339; SP–3311)
Specialization of instrumental conducting and a survey of ensemble materials for various levels of ability and maturity.

Mus 3331s. Choral Conducting and Materials. (2 cr; QP–3339; SP–3311)
Specialization of choral conducting and a survey of ensemble materials for various levels of ability and maturity.

Mus 3400s. Opera Workshop. (ArtP; 4 cr; repeatable to 8 cr; prereq #)
Practical introduction to opera performance. Students become familiar with a number of operas and perform selections emphasizing ensemble work.

Mus 3500f,s. Composition. (1-4 cr; repeatable; QP–1121; SP–1101; #)
Original work guided on an individual basis.

Mus 3993f,s. Directed Study. (1-5 cr; repeatable; prereq #)

Mus 4101s. Form and Analysis. (4 cr; QP–1123; SP–1102; not offered 1999-2000)
Analysis of small and large structural forms in music. Emphasis on student analysis of works of all periods.

Mus 4901f,s. Senior Project. (1 cr; S-N only)
Culminating activity that allows a graduating student to demonstrate competence as a musician. Projects may take the form of a solo recital, lecture-recital, research paper, chamber music recital, or other major study. Project should be determined in the student’s junior year and approved by the music faculty. Majors taking Mus 3200 through 3219 normally satisfy this requirement with a senior recital.

Mus 4994f,s. Senior Honors Project. (1-5 cr; repeatable; prereq participation in Honors Program, #)
A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

University College Courses

Mus 3051. UC: Piano Pedagogy I. (ArtP; 2 cr; QP–#; SP–1200 or #)
This course is a study, demonstration, and discussion about the various elements of piano teaching methods, techniques, and materials for elementary and early intermediate levels. This includes analysis of various piano courses and piano literature, discussion of technical regimes, ideas for private and group lessons, and planning for the practical business aspect of teaching. Recommended for piano majors.

Mus 3052. UC: Piano Pedagogy II. (ArtP; 2 cr; QP–#; SP–1200 or #)
This course will cover much intermediate literature from each of the four major periods of music with practical ideas to put into immediate use by current teachers. Piano literature to motivate and retain students as well as the study of performance practices as they relate to each musical style will be emphasized.
Natural Science (NSci)

This discipline is in the Division of Science and Mathematics.

Objectives—Courses in this group give students the opportunity to study scientific topics that reach across the boundaries of the traditional disciplines.

Course Descriptions

NSci 1051. The State of the Planet. (Envt; 4 cr; offered when feasible)
An investigation of the present physical state of the soil, water, and atmosphere of the earth and how these important systems are changing. Soil generation and erosion, desertification, the hydrologic cycle, global climate change, ozone depletion.

NSci 2100. Variable Topics: Field Experience in Natural History. (Sci; 4 cr; repeatable when topic changes; offered when feasible)
Field study of the natural history of a selected area (possible sites: western Minnesota, the Badlands, the Black Hills, Ireland, and Brazil); study of the geology, natural resources, soils, and vegetation of a region; understanding of the natural history and evolution of the landscape, fauna, and flora; influence of the natural setting on humans and environmental problems associated with human development.

NSci 3100. Scientific Biography and Autobiography. (2 cr; repeatable with #; prereq #; offered when feasible)
The life, work, and times of eminent scientists through biography and autobiography.

NSci 3200. Scientific Biography and Autobiography. (2 cr; repeatable with #; prereq #; offered when feasible)
The life, work, and times of eminent scientists through biography and autobiography.

Philosophy (Phil)

This discipline is in the Division of the Humanities. The philosophy program provides an environment in which students receive rich, well-rounded instruction in philosophy whose pursuit is essential to a liberal arts education.

Objectives—The philosophy program is designed to offer students the opportunity to study systematically the works of significant figures in philosophy; investigate the fundamental problems and systems of thought that frame philosophical inquiry; develop the ability to think and write critically and effectively; and cultivate the logical, analytical, and conversational skills necessary for stimulating and fruitful philosophical inquiry.

Major Requirements

include one from:
- Phil 1111—Philosophical Skills
- Phil 2101—Introduction to Symbolic Logic

any one from:
- Phil 1101—Introduction to Philosophy
- Phil 1121—Philosophy of Religion
- Phil 2111—Introductory Ethics
- Phil 2121—Philosophical Explorations
- Phil 2131—Philosophy of Science

any two from:
- Phil 3121—Political Philosophy
- Phil 3131—Philosophy of Law
- Phil 4100—Moral Issues and Theories
- Phil 4111—Ethical Theory

any two from:
- Phil 3101—Metaphysics
- Phil 3141—The Theory of Knowledge
- Phil 4121—Philosophy of Language
- Phil 4130—Contemporary Issues in Philosophy

any two from:
- Phil 3151—The Classical World
- Phil 3161—The Medieval World and the Renaissance
- Phil 3171—The Modern World
- Phil 4000—Topics in the History of Philosophy

Phil 4901—Senior Philosophical Defense

Minor Requirements

include one from:
- Phil 1111—Philosophical Skills
- Phil 2101—Introduction to Symbolic Logic

any one from:
- Phil 1101—Introduction to Philosophy
- Phil 1121—Philosophy of Religion
- Phil 2111—Introductory Ethics
- Phil 2121—Philosophical Explorations
- Phil 2131—Philosophy of Science

any one from:
- Phil 3121—Political Philosophy
- Phil 3131—Philosophy of Law
- Phil 4100—Moral Issues and Theories
- Phil 4111—Ethical Theory

any one from:
- Phil 3101—Metaphysics
- Phil 3141—The Theory of Knowledge
- Phil 4121—Philosophy of Language
- Phil 4130—Contemporary Issues in Philosophy

any one from:
- Phil 3151—The Classical World
- Phil 3161—The Medieval World and the Renaissance
- Phil 3171—The Modern World
- Phil 4000—Topics in the History of Philosophy
Course Descriptions

**Phil 1101. Introduction to Philosophy.** (Hum; 4 cr; offered fall 1999, spring 2001)
An introduction to fundamental problems in philosophy. The course will emphasize the development of basic reading, writing, and analytical skills required for philosophical investigation.

**Phil 1111s. Philosophical Skills.** (Hum; 4 cr; not offered 2000-2001)
Philosophical Skills, or "How to win an argument," is a course in philosophical reasoning and argumentation. Its primary goal is to help with the development of analytical skills for philosophical inquiry. Emphasis on modal properties such as impossibility and necessity; modal relations like implication and inconsistency; arguments (e.g., is time travel possible? or do we have freedom to do otherwise?) which "turn on" modal properties, relations, or principles; and such philosophical pitfalls as question-begging and circularity.

**Phil 2101f. Introduction to Symbolic Logic.** (HDiv; 4 cr; not offered 2000-2001)
An introduction to formal or deductive logic, this course will cover 1) basic concepts of logical argumentation, 2) Aristotelian logic, 3) symbolic translations, truth tables, and theory of deduction. The final part of the course focuses on applications of the symbolic language and formal tools to philosophically interesting puzzles and paradoxes.

**Phil 2111f. Introductory Ethics.** (Hum; 4 cr; not offered 1999-2000)
This course has two major aims: 1) to examine critically normative ethical theories, like utilitarianism or social contract theory, as responses to the age-old problem of what makes right acts right and wrong acts wrong; 2) to explore "real life" moral problems, debates, and arguments in light of the methods and/or standards of moral assessment employed by ethical theorists.

**Phil 2131f. Philosophy of Science.** (HDiv; 4 cr; not offered 1999-2000)
An introduction to modern philosophical discussion concerning the nature of science. The first part of the course focuses on the basic concepts and logic of scientific inquiry. The second part discusses topics such as the aims and values of scientific inquiry, the relationship between scientific progress and truth, and the social and cultural make-up of scientific communities. Readings will include feminist views on science.

**Phil 2150. Variable Topics in Philosophical Explorations.** (Hum; 4 cr; offered fall 1999, spring 2001)
Exploration of a particular set of philosophical problems. A principal goal is to develop analytical, conversational, and writing skills necessary for philosophical inquiry. Topics will vary from course offering to course offering.

**Phil 3101. Metaphysics.** (Hum; 4 cr; QP–1201 or 1213 or 1215 or #; SP–any 1xxx or 2xxx course except 2101; not offered 1999-2000)
Explores fundamental metaphysical issues such as the nature of reality, the notion of personal identity, the relationship between language, thought, minds, and the world. Philosophical works of both classic and contemporary philosophers such as Plato, Aristotle, Quine, Putnam, and Kripke are discussed.

**Phil 3111. Professional Ethics.** (E/CR; 4 cr; offered spring, fall 2000)
A critical examination of moral issues that arise in our professions. Possible topics include normative ethical theories (theories about what makes right acts right and wrong acts wrong); affirmative action and preferential hiring; duties to one’s employer; autonomy in the workplace; ethical issues in advertising; corporate responsibility; sexual harassment; coercive wage offers and plea bargains; responsibility for the environment.

**Phil 3121f. Political Philosophy.** (SS; 4 cr; QP–1201 or 1213 or 1215 or #; SP–any 1xxx or 2xxx course except 2101; not offered 2000-2001)
Explores fundamental issues in political theory (e.g., the nature of the state, political authority, distributive justice, nature and civil rights) using important works of major political theorists (like Plato, Hobbes, Mill, Rawls).

**Phil 3131s. Philosophy of Law.** (SS; 4 cr; QP–1201 or 1213 or 1215 or #; SP–any 1xxx or 2xxx course except 2101; not offered 1999-2000)
Introduction to and critical examination of important theoretical and practical normative issues in the philosophy of law, some examples of which are the nature of law; the relationship between morality and the law; the nature of judicial reasoning; the justification of punishment; plea bargaining; legal responsibility; civil disobedience.

**Phil 3141. The Theory of Knowledge.** (Hum; 4 cr; QP–1201 or 1213 or 1215 or #; SP–any 1xxx or 2xxx course except 2101; not offered 2000-2001)
Explores historical and contemporary views on the limits, justification, and nature of human knowledge. Topics include experiential versus a priori knowledge, the nature of belief, skepticism, and different theories of justification.

**Phil 3151s. The Classical World.** (Hist; 4 cr; QP–1201 or 1213 or 1215 or #; SP–any 1xxx or 2xxx course except 2101; not offered 2000-2001)
Aims: exploration of the major philosophical views of the pre-socratic thinkers, Plato, and Aristotle. The course will also address the decline of the Greek tradition.

**Phil 3161s. The Medieval World and the Renaissance.** (Hist; 4 cr; QP–1201 or 1213 or 1215 or #; SP–any 1xxx or 2xxx course except 2101; not offered 2000-2001)
Aims: exploration of the major philosophical views of authors such as St. Thomas Aquinas, Machiavelli, Scotus, Ockham, Suarez, Copernicus, and Galileo.

**Phil 3171f. The Modern World.** (Hist; 4 cr; QP–1201 or 1213 or 1215 or #; SP–any 1xxx or 2xxx course except 2101)
Aim: exploration of major philosophical views ranging from Hobbes’ work to Kant’s, Wittgenstein’s, and Sartre’s.
**Phil 4000f. Variable Topics in the History of Philosophy.**
(Hist; 4 cr; repeatable when topic changes; QP-1201 or 1213 or 1215 or #; SP-any 1xxx or 2xxx course except 2101; not offered 1999-2000)

Intensive investigation of a particular philosophical problem, area, or work of a philosopher. Topics will vary from course offering to course offering.

**Phil 4100f. Variable Topics in Moral Issues and Theories.**
(Hum; 4 cr; repeatable when topic changes; QP-1201 or 1213 or 1215 or #; SP-any 1xxx or 2xxx course except 2101; not offered 2000-2001)

This “special topics” course involves intensive investigation of a particular problem, area, or theory in moral philosophy. Possible topics include moral responsibility, autonomy, punishment, and moral issues in philosophical psychology (e.g., is weakness of will possible, and if so, are we doing wrong when we act akratically or are we blameworthy for our akratic actions?). Topics announced in advance and will vary from course offering to course offering.

**Phil 4111s. Ethical Theory.**
(Hum; 4 cr; QP-1201 or 1213 or 1215 or #; SP-any 1xxx or 2xxx course except 2101; not offered 1999-2000)

The primary purpose of this course is to engage in philosophical deliberation on metaethical concerns. A sample of central issues to be explored are these: Can moral obligations change over the passage of time? Does ‘ought’ imply ‘can’? Is there a real distinction between “subjective moral obligation” and “objective moral obligation”? Is it possible for there to be an individual and time, such that relative to that time, the individual has two moral obligations that cannot be jointly fulfilled? Of the different sorts of normative obligations like legal, prudential, and moral, is moral obligation overriding?

**Phil 4121s. Philosophy of Language.**
(Hum; 4 cr; QP-1201 or 1213 or 1215 or #; SP-any 1xxx or 2xxx course except 2101; not offered 2000-2001)

Traditional and contemporary discussions of philosophical problems such as the nature of language; its relationships to the world, to human thought, and to truth; the nature of logical reasoning; metalogical problems. Readings from philosophers such as Frege, Russell, Quine, Putnam, Goodman, Wittgenstein, and Kripke.

**Phil 4130s. Variable Topics in Contemporary Issues in Philosophy.**
(Hum; 4 cr; repeatable up to 8 cr; QP-1201 or 1213 or 1215 or #; SP-any 1xxx or 2xxx course except 2101; not offered 2000-2001)

Exposure to, and critical examination of, philosophical issues of special contemporary interest. Topics may include the nature of analytic philosophy and its relationship to other philosophical traditions such as continental or feminist philosophy, the debate on realism and anti-realism, the notion of objectivity.

**Phil 4901s. Senior Philosophical Defense.**
(1 cr)

Oral presentation and discussion of a paper selected among those written by the student for a 3xxx or 4xxx course. Faculty will participate in the discussion.

**Phil 4993f,s. 2993f,s. 3993f,s. 4993f,s. Directed Study.**
(1-5 cr; repeatable; prereq #)

**Phil 4994f,s. Senior Honors Project.**
(1-5 cr; repeatable; prereq participation in Honors Program, #)

A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

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**Physics**

**Physical Education and Athletics (PE)**

(See Wellness and Sport Science.)

**Physical Science (PSci)**

(See Natural Science.)

**Physics (Phys)**

This discipline is in the Division of Science and Mathematics.

**Objectives**—The physics program is designed to help students understand the concepts of classical and modern physics while also developing their ability to solve quantitative problems in these areas. It provides the opportunity for students to acquire the skills necessary to perform experimental work. The program develops students’ ability to communicate, in form and content, both verbally and in writing, the results of scientific work.

The physics program offers a background suitable for students planning to pursue graduate study or careers in industry, research, or teaching. It also provides a solid foundation for any career requiring analytical reasoning.

**Major Requirements**

- Phys 1101-1102—General Physics I-II
  (or advanced placement)
- Phys 2101—Modern Physics
- Phys 2201—Circuits and Electronic Devices
- Phys 2202—Electronics
- Phys 3101—Classical Mechanics
- Phys 3401—Experimental Physics
- Phys 4101—Electromagnetism
- Phys 4201—Quantum Mechanics
- Phys 4901—Senior Thesis
- Math 1101-1102-2101—Calculus I-II-III
- Math 2401—Differential Equations

Required courses may not be taken S-N. The GPA in these courses must be at least 2.50.

**Minor Requirements**

- Phys 1101-1102—General Physics I-II
  (or advanced placement)
- Phys 2101—Modern Physics

An additional 4 credits of Phys 2xxx or Phys 3xxx

Math 1101-1102-2101—Calculus I-II-III

Required courses may not be taken S-N. The GPA in these courses must be at least 2.50.

**Teacher Preparation Requirements**

Physics is part of the requirement for licensure in physical science. For licensure, students must
acquire a high level of competency in physics or chemistry. The physics emphasis is listed here; the chemistry emphasis is listed in the chemistry section. Note that either emphasis will satisfy the licensure requirement.

For the physics emphasis, students must complete:

**Phys 1101-1102—General Physics I-II**
**Phys 2101—Modern Physics**
**Phys 2201—Circuits and Electronic Devices**
**Phys 3101—Classical Mechanics**
**Phys 3301—Optics**
**Chem 1101-1102—General Chemistry I-II**
or **Chem 1111-1112—Honors General Chemistry I-II**
**Chem 2301—Organic Chemistry I**
**Chem 2311—Organic Chemistry Lab I**
**Chem 3101—Analytical Chemistry**

required professional education courses, including the science methods course and student teaching in physics

The teaching minor in physics requires:

**Phys 1101-1102—General Physics I-II**
**Phys 2101—Modern Physics**
**Phys 2201—Circuits and Electronic Devices**
**Phys 3101—Classical Mechanics**

required professional education courses, including the science methods course and student teaching in physics

Early consultation with an advisor in physics is recommended. Required courses may not be taken S-N unless offered S-N only.

**Course Descriptions**

**Phys 1000. Variable Topics in Physics.** (Sci; 2-5 cr; repeatable when topic changes; offered when feasible)

Treatment of topics not included in the regular curriculum. Topics may include but need not be restricted to environmental physics, astrophysics, the history of physics, cosmology.

**Phys 1051f. Astronomy.** (Sci-L; 5 cr)

Motions of celestial objects; the solar system; telescopes and other astronomical instruments; stars and their properties; the life cycles of stars; galaxies; and cosmology. Night viewing sessions required. (4 hrs lect, 2 hrs lab)

**Phys 1061f. Physics of Sound and Music.** (Sci; 4 cr)

Wave characteristics, sound properties, resonance, the human voice and hearing, basic musical instruments, analysis and synthesis of complex waves, acoustics.

**Phys 1101s. General Physics I.** (Sci-L; 5 cr; QP-1200, Math 1202; SP-1101, Math 1102 or #)

Coulomb’s law, electric field, Gauss’s law, electric potential, capacitance, dielectrics, current, resistance, circuits, magnetic field, Ampere’s law, inductance, Faraday’s law, AC circuits, Maxwell’s equations, electromagnetic waves, nature of light, reflection, refraction, optical instruments, interference, diffraction. (4 hrs lect and rec, 2 hrs lab)

**Phys 2101s. Modern Physics.** (Sci-L; 5 cr; QP-1202, Math 3203; SP-1102, Math 2101 or #)

Special relativity, quantum nature of matter and radiation, Bohr-Sommerfeld atom, atomic spectra, uncertainty principle, Schrödinger equation, hydrogen atom, electron spin, Pauli principle, periodic table, radioactivity, fission and fusion of nuclei, properties of nuclei. (4 hrs lect, 2 hrs lab)

**Phys 2201s. Circuits and Electronic Devices.** (Sci-L; 4 cr; QP-1201, SP-1102 or #)

DC and AC circuits, pulses and Fourier analysis, semiconductor physics, p-n junctions, diodes and their applications. (3 hrs lect, 3 hrs lab)

**Phys 2202f. Electronics.** (Sci-L; 4 cr; SP-2201 or #)

Transistors, amplifiers, feedback, oscillators, operational amplifiers and their applications, logic gates. (3 hrs lect, 3 hrs lab)

**Phys 3000. Variable Advanced Topics in Physics.** (Sci; 2-5 cr; repeatable when topic changes; offered when feasible)

Treatment of topics not included in the regular curriculum. Topics may include but need not be restricted to astrophysics, laser physics, physics of fluids, plasma physics, superfluidity and superconductivity, solid state physics, spectra of atoms and molecules.

**Phys 3101f. Classical Mechanics.** (Sci; 4 cr; QP-3050, Math 3203; SP-2101, Math 2401 or #; not offered 1999-2000)

Kinematics and dynamics of a particle, oscillations, central-force motion, systems of particles, rigid-body rotations, gravitation, non-inertial coordinate systems, Lagrangian and Hamiltonian formulations, dynamics of rigid bodies. (4 hrs lect)

**Phys 3201s. Mathematical Methods in Physics.** (Sci; 4 cr; QP-Math 3203; SP-Math 2401; not offered 1999-2000)

Complex analytic functions, Taylor and Laurent series, calculus of residues, Fourier series and integrals, series solutions of differential equations, partial differential equations, special functions, applications to physics. (4 hrs lect)

**Phys 3301s. Optics.** (Sci-L; 4 cr; QP-1202, Math 3203; SP-2101; not offered 2000-2001)

Light as a wave phenomenon, electromagnetic nature of light, Huygen’s principle, interference, diffraction—Fraunhofer and Fresnel, polarization, dispersion, absorption and scattering. (3 hrs lect, 3 hrs lab)

**Phys 3401f. Experimental Physics.** (Sci-L; 4 cr; QP-3050; SP-2101)

An introduction to modern experimental methods. (3 hrs lect, 3 hrs lab)

**Phys 4101f. Electromagnetism.** (Sci; 4 cr; QP-3050, Math 3203; SP-2101, Math 2401 or #; not offered 2000-2001)

Vector calculus, electrostatics, Laplace and Poisson equations, dielectrics, magnetostatics, magnetic properties of matter, electromagnetic induction, Maxwell’s equations, electrodynamics, electromagnetic waves. (4 hrs lect)
Phys 4201s. Quantum Mechanics. (Sci; 4 cr; QP 3050, Math 3203; SP 2101, Math 2401)
Uncertainty principle, Schrödinger equation, commutation relations, momentum space wave functions, Dirac notation, applications to problems in one dimension and the hydrogen atom, angular momentum. (4 hrs lect)

Phys 4901s. Senior Thesis. (1 cr; prereq sr)
Students will select a topic of current interest in physics, search the physics literature, synthesize their findings, and present the results both orally and in writing.

Phys 1993, 2993, 3993, 4993. Directed Study. (1-5 cr; repeatable; prereq #)

Phys 4994. Senior Honors Project. (1-5 cr; repeatable; prereq participation in Honors Program, #)
A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

Political Science (Pol)

This discipline is in the Division of the Social Sciences.

Objectives—Students who complete the political science major are able to critically analyze not only the behavior of political actors, but also their respective political institutions and political systems. The main objectives of the political science major are to enable students to use strong analytical skills and critical thinking in their analysis of theories, institutions, and processes in political science. The program prepares students for work in government and private business, and it prepares students for additional training in law and graduate programs.

A political science major is expected to show knowledge of political institutions, behavior, and processes in domestic and/or international settings. Students learn how and why governments are structured, operate, make policy, and manage social conflict. A political science major is expected to demonstrate a critical understanding of the major schools of political thought. Upon completion of the major, students of political science:

1) have the ability to critically analyze, interpret, and synthesize the theories that are prevalent in a major subfield of political science
2) are more empowered to participate in government due to increased familiarity with politics and government
3) are adequately prepared for entrance into graduate or professional school

Major Requirements include a minimum of 36 credits taken within the political science discipline. Courses taken within political science must include:

Pol 1101—Introduction to Political Science
Pol 2101—Introduction to Political Science Analysis

In addition, political science majors must complete all of the requirements in at least one of the following subfields:

Subfield I: American Politics
Pol 1201—American Government and Politics
12 upper division credits in the American politics subfield (Pol 32xx)
8 upper division credits in political theory (Pol 33xx), international relations (Pol 34xx), and/or comparative politics (Pol 35xx)
4 additional elective credits in Pol 3xxx courses

Subfield II: International Relations and Comparative Politics
Pol 1401—World Politics
12 upper division credits in the international relations and comparative politics subfield (Pol 34xx, Pol 35xx)
8 upper division credits in American politics (Pol 32xx) and/or political theory (Pol 33xx)
4 additional elective credits in Pol 3xxx courses

Subfield III: Political Theory
12 upper division credits in the political theory subfield (Pol 33xx)
8 upper division credits in American politics (Pol 32xx), international relations (Pol 34xx), and/or comparative politics (Pol 35xx)
8 additional elective credits in Pol 3000 courses

Courses with grades of D may not be used to meet the major requirements.

Finally, political science majors are required to construct an academic portfolio. See the division office for details about the contents and the deadlines for submission.

The political science discipline strongly recommends that students take advantage of opportunities in internships, field studies, and study abroad.

Minor Requirements
The political science minor requires at least 20 political science credits. Minors must complete:

Pol 1101—Introduction to Political Science
at least 8 upper division Pol 3xxx credits

Courses with grades of D may not be used to meet the minor requirements.

Teacher Preparation Requirements
Students seeking teaching licensure in any of the social sciences must complete a social science major. Political science majors seeking
teaching licensure must also complete a social science major and the required professional education courses, including methods and student teaching in social studies. Required courses may not be taken S-N unless offered S-N only.

**Course Descriptions**

**Pol 1101f. Introduction to Political Science.** (E/CR; 4 cr)
Scope and methods of study of forces and interests in politics, nature of the state and government, forms of government, electoral and party systems in the world, basic concepts of political science. Development, structure, and operation of the modern state with emphasis on totalitarian government and democratic government.

**Pol 1201f,s. American Government and Politics.** (E/CR; 4 cr)
Analysis of principles, organization, procedures, and powers of government in the United States. The federal system, national constitution, civil and political rights, party system; nature, structure, powers, and procedures of legislative, executive, and judicial departments of the national government.

**Pol 1401f. World Politics.** (IP; 4 cr)
The contemporary international system, including nationalism, international political economy, foreign policy formulation, and global concerns such as the environment and conflict. North/South debate, definitions of power, the new world order, regional vs. global conflicts, and avenues of cooperation.

**Pol 2101f. Introduction to Political Science Analysis.** (SS; 4 cr; QP–5 cr in any Pol 1xxx class or #; SP–4 cr in any Pol 1xxx class or #)
Research methodology and statistical tools used in political science. Emphasis includes research designs, theory and hypothesis testing, sampling and survey techniques, and other research strategies utilized in the field. Exposure to statistics and computer statistical packages.

**Pol 3201f. Legislative Process.** (SS; 4 cr; QP–1200, 1300; SP–1201, 2101 or #; not offered 2000-2001)
The internal organization of Congress, with emphasis on how rules and organizational changes affect the policy process. Topics include the evolution of the modern Congress, the committee system, the role of party leadership, and competing theories of congressional organization. In addition, comparisons/contrasts are drawn from other legislatures in democracies around the world.

**Pol 3211s. The American Presidency.** (SS; 4 cr; QP–1200, 1300; SP–1201, 2101 or #; not offered 2000-2001)
Traces the development of the American presidency over time. Major theories of presidential behavior and success are examined, as well as the literature on presidential popularity and executive/congressional relations.

**Pol 3221f. Judicial Politics.** (SS; 4 cr; QP–1200, 1300; SP–1201, 2101 or #; not offered 1999-2000)
Role of judges, police, attorneys, and interest groups within the political system, with analysis focusing on each as political actors. Areas of discretion in the legal system. Extra-legal predictors of judicial decision making and certiorari voting.

**Pol 3231s. Constitutional Law: Civil Liberties and Civil Rights.** (HDiv; 4 cr; QP–1200; SP–1201 or #; not offered 2000-2001)
Examination of major Supreme Court opinions in the areas of freedom of religion, speech, assembly, and the press. Topics include the definitions of obscenity and libel, the Court’s struggle with the right to privacy, and civil rights.

**Pol 3232s. Constitutional Law: Governmental Powers and Constraints.** (SS; 4 cr; QP–1200, 1300; SP–1201 or #; not offered 1999-2000)
Examination of major Supreme Court opinions in the areas of congressional, executive, and judicial authority; nation-state relations; and economic liberties. Topics include substantive vs. procedural due process, the Takings Clause, the contract clause, and the powers to tax and spend.

**Pol 3241f. Political Parties and Interest Groups.** (SS; 4 cr; QP–1200, 1300; SP–1201, 2101 or #; not offered 2000-2001)
Organization, operation, and development of political parties and interest groups in the United States.

**Pol 3251f. Political Participation and Voting Behavior.** (SS; 4 cr; QP–1200, 1300; SP–1201, 2101 or #; not offered 1999-2000)
This course provides a broad overview of factors influencing the political behavior of groups and individuals both within and outside institutions. Particular emphasis is placed on examining issues such as voter turnout, economic influences on voting patterns, and social movement mobilization.

**Pol 3260f,s. Variable Topics in American Politics.** (See specific topics for general education categories; 4 cr; repeatable when topic changes; QP–1200; SP–1201 or #)
Selected topics in American politics such as state and local politics, media and politics, minorities and social policy, and political psychology.

**Pol 3261s. State and Local Politics.** (SS; 4 cr; QP–1200; SP–1201 or #; not offered 2000-2001)
This course examines theoretical discussions of American democracy in the context of the actual performance of American government and society on a variety of levels. Particular emphasis is placed on the ways American democracy functions on the subnational level in states, rural communities, and urban centers. Analysis of principles, organizations, procedures, and functions of state and local government, both urban and rural, in the United States.

**Pol 3262s. Minorities and Public Policy.** (HDiv; 4 cr; QP–1200; SP–1201 or #; not offered 2000-2001)
Analysis of the ways race, ethnicity, and other factors shape political engagement; their implications for public policy and the policy process.

**Pol 3263f. Political Psychology.** (SS; 4 cr; QP–1200, 1300; SP–1201, 2101; Psy 1051 or # recommended; not offered 1999-2000)
Examines the utility of concepts from personality and social psychology for conducting political analysis and understanding political behavior. Explores the role of the individual, group processes, and the political context in political decision making by both leaders and nonleaders.
Pol 3264s. American Political Culture. (Hist; 4 cr; QP–1200, 1300; SP–1201, 2101 or #; not offered 1999-2000)
A survey of the ideas shaping the U.S. political system and Americans’ political behavior. Examines the ways that U.S. political culture has shaped institutional development, policy outcomes, and the everyday political experiences within the political system.

Pol 3265s. Honors: American Political Culture. (Hist; 4 cr; QP–1200, 1300; SP–1201, 2101 or #; # for students not in Honors Program; not offered 1999-2000)
Same as Pol 3264. A survey of the ideas shaping the U.S. political system and Americans’ political behavior. Examines the ways that U.S. political culture has shaped institutional development, policy outcomes, and the everyday political experiences within the political system.

Pol 3301f. Contemporary Political Ideologies. (Hum; 4 cr; QP–1100; SP–1101 or #; not offered 2000-2001)
Major currents of political theory from Marx to present: Marxism, socialism, syndicalism, anarchism, fascism, political ideologies of antidemocratic thought, and totalitarian regimes.

Pol 3350f,s. Variable Topics in Western Political Thought. (See specific topics for general education categories; 4 cr; repeatable when topic changes; QP–1100; SP–1101 or #)
Development of the Western political tradition from classical Greek thought to recent phases of American political life. Possible topics include ancient political thought, medieval political thought, modern political thought, and American political thought.

Pol 3351f. Ancient and Middle Ages. (Hum; 4 cr; QP–1100; SP–1101 or #)
Survey of classical Greek thought, Plato and Aristotle, primitive natural law, Cynics and Stoics, theory in Roman Republic and Empire, early Christianity and the church fathers, moral theory and political theory, empire and church in ideology, Roman and canon law, St. Thomas, political thought in the 14th and 15th centuries.

Pol 3352s. Modern. (Hum; 4 cr; QP–1100; SP–1101 or #)
Machiavelli; theories during the Renaissance, Reformation, and Counter-Reformation. Early modern absolutism, the emergence of modern contract theory, constitutionalism, liberalism, and utopianism.

Pol 3353s. American Political Thought. (Hum; 4 cr; QP–1100; SP–1101 or #)
Development of the American political tradition from the Puritan theocracy to recent phases of American political life.

Pol 3401s. U.S. Foreign Policy. (SS; 4 cr; QP–1400; SP–1401 or #; not offered 1999-2000)
Institutions and processes of American foreign policy. Major factors to be considered and levels of analysis that allow for the examination and dissection of foreign policy decisions. Case study analysis, e.g., Cuban Missile Crisis, Vietnam, Iran/Contra-gate.

Pol 3411f. International Law. (E/CR; 4 cr; QP–1400; SP–1401 or #; not offered 2000-2001)
Relations of international law to individuals, states, the international community, jurisdictional problems, survey of principles developed by diplomatic agents and consuls, treaties, arbitration, treatment of aliens, pacific settlement. War and hostile measures short of war, military occupation, war crimes, neutrality, collective security sanctions.

Pol 3421f. International Organizations. (E/CR; 4 cr; QP–1400; SP–1401 or #; not offered 1999-2000)
Origins of diplomacy and its role in maintaining communication among nations, including the recent and special role of international organizations. History of the practice of diplomacy, current bilateral diplomatic practices, and multilateral interactions as practiced through the United Nations and the League of Nations before it. Structure and functional agencies of the U.N. and role in international peacekeeping or collective security.

Pol 3450s. Variable Topics in International Relations. (See specific topics for general education categories; 4 cr; repeatable when topic changes; QP–1400; SP–1401 or #; not offered 2000-2001)
Advanced topics in international relations, such as comparative foreign policy and international relations theory.

Pol 3451s. Comparative Foreign Policy. (IP; 4 cr; QP–1400; SP–1401 or #; not offered 2000-2001)
Comparative examinations of foreign policies of selected countries, i.e., the United States, China, and Russia (the Soviet Union). The rise and fall of the Cold War; the triangular relationship between Washington, Beijing, and Moscow; Russia’s new foreign policy; and U.S. foreign and security policy in the post-Cold War era.

Pol 3452s. International Relations Theory. (IP; 4 cr; QP–1400; SP–1401 or #; not offered 1999-2000)
Theory and practice of contemporary international relations. Realism and idealism, national power, systems theory, integration theory, war and peace, conflict resolution, and the world government.

Pol 3500s. Variable Topics in Comparative Politics. (See specific topics for general education categories; 4 cr; repeatable when topic changes; QP–1100; SP–1101 or #)
In-depth analysis of major government systems from regions of the world other than Europe or issues in comparative public policy, e.g., comparing social welfare budgetary priority across nation-states.

Pol 3501s. Government and Politics of Asia. (SS; 4 cr; QP–1100; SP–1101 or #; not offered 1999-2000)
Examination of governments, political and leadership changes, and economic developments in China, Japan, and Korea. Modernization, democratization, political pluralism, revolution, authoritarianism, and civil-military relations.

Pol 3502s. Government and Politics of Europe. (SS; 4 cr; QP–1100; SP–1101 or #; not offered 2000-2001)
Analysis of major government systems of Europe, including Great Britain, the former Soviet Union or Commonwealth of Independent States, and Eastern Europe, France, and Germany, with emphasis on how different institutions, structure, and culture result in different types of public policy.

Pol 3503s. Women in Politics Worldwide. (IP; 4 cr; QP–1200, 1300; SP–1201, 2101 or #; not offered 1999-2000)
Examines the ways gender influences politics throughout the world. Topics covered include the “gender gap” and voter turnout, women’s involvement in linkage organizations, such as parties and interest groups, and finally, policy outcomes regarding women in different kinds of political systems.
Pol 3996f,s. Field Study in Political Science. (1-16 cr; repeatable; max of 4 cr may be applied to the major or minor; prereq # offered when feasible)
Field study of governmental organization; internship with legislature, a state or local administrative office, lobbying group, or other position involving direct experience with government, governmental officials, or political organizations and environment.

Pol 1993f,s, 2993f,s, 3993f,s, 4993f,s. Directed Study. (1-5 cr; repeatable; prereq pol sci major or #)
Individual research topics; normally restricted to political science majors.

Pol 4994f,s. Senior Honors Project. (1-5 cr; repeatable; prereq participation in Honors Program, #)
A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

Psychology (Psy)

This discipline is in the Division of the Social Sciences. The psychology curriculum focuses on understanding the scientific method and applying it to the problems of the behavioral sciences and individual and social human behavior. It provides students with basic methodological skills, practice in applying these skills, and an introduction to core areas of psychology. The courses meet the needs of liberal arts students as well as students planning to specialize in one of the fields of psychology at the graduate level.

**Objectives**—(1) Awareness of the range of knowledge (data, methods) in psychology; (2) competency in translating behavioral questions into the terms of scientific inquiry; (3) competency in reading and critically synthesizing the technical literature in psychology; (4) competency in quantifying and statistically analyzing behavior; (5) awareness of ethical issues in psychology.

**Major Requirements**
Psy 1101-1102—Foundations of Psychology I-II
Math 1601—Introduction to Statistics
or
Math 2601—Statistical Methods
IS 4101—Introduction to Professional Conduct Codes, Legal Constraints, and Ethics in the Human Services

**4 credits from:**
Psy 3101—Learning Theory and Behavior Modification
Psy 3111—Cognition I
Psy 3112—Cognition II
Psy 3201—Comparative Psychology
Psy 3211—Biological Psychology

20 additional credits in Psy 3xxx or 4xxx courses
or
Mgmt 3151—Human Resources Management I
or
Pol 3263—Political Psychology

at least 14 credits of which must be earned in courses other than:
Psy 4101—Helping Relationships
Psy 4896—Field Experiences In Psychology
Mgmt 3151—Human Resources Management I
Pol 3263—Political Psychology

and which must include an approved empirical research project of at least 4 credits or its equivalent. The approved research project is normally completed in one of the empirical investigations courses:
Psy 4610—Empirical Investigations in Cognitive Psychology
Psy 4620—Empirical Investigations in Biological Psychology
Psy 4630—Empirical Investigations in Personality, Psychopathology, and Psychological Intervention
Psy 4640—Empirical Investigations in Developmental Psychology
Psy 4650—Empirical Investigations in Social Psychology

or with an approved senior honors project (Psy 4994—Senior Honors Project)

Courses with grades of D may not be used to meet the major requirements.

**Writing and Computing Components**
The writing component of the general education requirements may be met in the following courses that require writing assignments and/or term papers and are required for the major:
Psy 1101-1102, Foundations of Psychology I-II

**Any one of the “Empirical Investigations” courses:**
Psy 4610—Empirical Investigations in Cognitive Psychology
Psy 4620—Empirical Investigations in Biological Psychology
Psy 4630—Empirical Investigations in Personality, Psychopathology, and Psychological Intervention
Psy 4640—Empirical Investigations in Developmental Psychology
Psy 4650—Empirical Investigations in Social Psychology
Psy 4994—Senior Honors Project

The computing component of the general education requirements may be met in the following courses that require computer activities and are required for the major:
Math 1601—Introduction to Statistics
or
Math 2601—Statistical Methods
Any one of the “Empirical Investigations” courses:
Psy 4610—Empirical Investigations in Cognitive Psychology
Psy 4620—Empirical Investigations in Biological Psychology
Psy 4630—Empirical Investigations in Personality, Psychopathology, and Psychological Intervention
Psy 4640—Empirical Investigations in Developmental Psychology
Psy 4650—Empirical Investigations in Social Psychology
Psy 4994—Senior Honors Project
Psy 3601—Quantitative Methods in Psychology also entails extensive computer use, though it is not required for the major.

Required courses may not be taken S-N unless offered S-N only.

Minor Requirements
Psy 1101-1102—Foundations of Psychology I-II
Math 1601—Introduction to Statistics
or
Math 2601—Statistical Methods
IS 4101—Introduction to Professional Conduct Codes, Legal Constraints, and Ethics in the Human Services

4 credits from:
Psy 3101—Learning Theory and Behavior Modification
Psy 3111—Cognition I
Psy 3112—Cognition II
Psy 3201—Comparative Psychology
Psy 3211—Biological Psychology
10 additional credits in Psy 3xxx or 4xxx courses
at least 6 credits of which must be earned in courses other than:
Psy 4101—Helping Relationships
Psy 4896—Field Experiences In Psychology

Courses with grades of D may not be used to meet the minor requirements.

Teacher Preparation Requirements
Students seeking licensure in any of the social sciences must complete a social science major. Psychology majors seeking licensure must also complete a social science major and the required professional education courses, including methods (SScE 4103—Methods of Teaching Social Science in the Secondary School) and student teaching in social studies.

The following courses are recommended for teacher candidates who are not majoring in psychology but expect to teach an occasional psychology course:
Psy 1101-1102—Foundations of Psychology I-II
Psy 3301—Personality I: Dimensions and Assessment
Psy 3311—Personality II and Psychopathology I
Psy 3312—Psychopathology II
Psy 3611—History and Philosophy of Psychology

one course from:
Psy 3111—Cognition I
Psy 3112—Cognition II
Psy 3211—Biological Psychology
Psy 3401—Developmental Psychology I: Child Psychology
Psy 3402—Developmental Psychology II: Adolescence
Psy 3403—Developmental Psychology III: Adulthood, Aging, and Death
Math 1601—Introduction to Statistics
or
Math 2601—Statistical Methods

Course Descriptions
Psy 1051f. Introduction to Psychology. (SS; 4 cr)
An introduction to the science of mind and behavior intended for those not planning to major in psychology; does not count toward the requirements of the psychology major and is insufficient as a prerequisite for psychology lab courses. Topics include history of the field, biological bases for behavior, life span development, memory, cognition, learning, social processes, personality, and psychopathology. Includes laboratory/discussion sessions.

Psy 1061f.s. Introduction to the Development of the Child and Adolescent. (SS; 4 cr)
Theory, data, and research approaches in development from birth through adolescence. Prenatal and physical development as well as perceptual, cognitive, language, personality, and social development. Multicultural/global perspective. Does not count for elective credit for the 16-credit psychology component of the LAHS major or for the psychology major or minor.

Psy 1071f. Human Sexuality. (SS; 4 cr)
Survey of aspects of human sexuality, including intimacy and communication; male and female anatomy, physiology, and response; development of identity, sex role, and gender orientation; varieties of sexual expression; pregnancy and childbirth; contraception and disease prevention; sexual coercion and abuse; sexual dysfunctions and their treatment.

Psy 1081s. Drugs and Human Behavior. (SS; 2 cr)
Survey of psychoactive drugs, their effects on mind and behavior, and prevention and treatment of drug abuse.

Psy 1101s. Foundations of Psychology I. (SS; 4 cr)
Biological and cognitive bases of behavior. Topics include brain structure and function, sensory processes, cognition, learning theory, and evolutionary perspectives on behavior. Includes lab.

Psy 1102f. Foundations of Psychology II. (SS; 4 cr; QP—Math 1150 or Math 3605; SP—Math 1601 or Math 2601; not offered 1999-2000)
Complex human behavior and development: development across the life span, social psychology, emotion and motivation, personality, psychopathology, psychology of health, and psychological interventions. Includes lab.
Psy 3051s. The Psychology of Women. (HDiv; 4 cr; not offered 1999-2000)
Feminist approach to the psychological study of women’s personality, behavior, development, language issues, motivation, work and family lives, sexuality, health and psychobiology, adjustment and therapy, and victimization experiences. Focuses on women of color, feminist research methodology, and feminist analysis of psychological theories of women.

Psy 3101f. Learning Theory and Behavior Modification. (SS; 4 cr; QP–1203; SP–1101, 1102)
Major theories of learning and their importance for understanding human and nonhuman behavior. Classical and operant conditioning, generalization, discrimination, stimulus control, animal cognition. Behavior modification theories and techniques and their application to clinical populations. Lab projects demonstrate learning and behavior modification theories, concepts, and techniques and illustrate research methods and theory testing. Includes lab.

Psy 3111f. Cognition I. (SS; 4 cr; QP–1203, Math 1150 or Math 3605; SP–1101, Math 1601 or Math 2601 or #)
Empirical study of sensory processes and perceptual organization with emphasis on vision and audition. Anatomy and physiology of sense organs, psychophysics, signal detection theory, attention, speech perception, and perceptual-motor coordination. Includes lab.

Psy 3112s. Cognition II. (SS; 4 cr; QP–1203, Math 1150 or Math 3605; SP–1101, Math 1601 or Math 2601 or #)
Empirical study of memory, language behaviors, representation of knowledge, judgment, decision making, problem solving, and creative thinking. Includes lab.

Psy 3201s. Comparative Psychology. (Sci-L; 4 cr; QP–1201, 1202 or Biol 1114 or # SP–1101 or Biol 2111)
Phylogenetic comparison of animal behavior emphasizing mechanisms of adaptation. Mechanisms of speciation, behavior genetics, evolution and ontogeny of the central nervous system, ethological determinants of behavior and learning. Includes lab.

Psy 3211s. Biological Psychology. (Sci-L; 5 cr; QP–1203 or Biol 1114 or # SP–1101, 1102)
Brain organization and function; an emphasis on an understanding of the neural processes that underlie human and nonhuman behavior. Incorporates information from psychology, neuroscience, endocrinology, physiology, chemistry, neurology, and zoology to investigate the physiological basis of behavior. Topics include sensory processes, drugs and addiction, biological rhythms, sexual differentiation, reproduction, methods in neuroscience, neuropsychological disorders, and clinical assessment. Lab projects focus on neuroanatomical organization and function of the brain. (4 hrs lect, 1 hr lab)

Exploration of proximate and ultimate influences on female behavior in human and nonhuman species. Sexual differentiation, gender differences in cognition, biological basis of sexual orientation, female sexual selection, and dominance.

Psy 3301f. Personality I: Dimensions and Assessment. (SS; 2 cr; QP–1201, Math 1150 or Math 3605; SP–1051 or 1101-1102, Math 1601 or Math 2601)
Nature of personality constructs and theories. Nature and measurement of personal traits; their dimensional structure, stability, development, and heritability.

Psy 3311f. Personality II and Psychopathology I. (SS; 2 cr; QP–1201, 1202, Math 1150 or Math 3605; SP–3301)
Nature and interaction of conscious and nonconscious cognitive processing, emotion, and motivation; relation to anxiety-based, affective, substance-use, and personality disorders.

Psy 3312s. Psychopathology II. (SS; 2 cr; QP–3400; SP–3311)
Major psychotic and organic psychological disorders and their treatment, including major affective disorders, schizophrenia, and major childhood disorders.

Psy 3401f. Developmental Psychology I: Child Psychology. (SS; 4 cr; QP–1201; SP–1051 or 1101-1102)
Theory, data, and research in development from conception to adolescence. Prenatal and physical development as well as perceptual, cognitive, personality, and social development. Language acquisition and Piaget’s theory of cognitive development.

Psy 3402s. Developmental Psychology II: Adolescence. (SS; 2 cr; QP–1201, 3500 or 1350; SP–1051 or 1101-1102, 3401 or 1061)
Theory, data, and research in adolescent development with emphasis on physical, cognitive, and social development.

Psy 3403s. Developmental Psychology III: Adulthood, Aging, and Death. (SS; 2 cr; QP–1201; SP–1051 or 1101-1102)
Theory, data, and research concerning the age group from young adulthood to old age. Emphasis on physical, cognitive, and social changes.

Psy 3501f. Social Psychology. (SS; 4 cr; QP–1201, 1202 or Soc 1100 or # SP–1051 or 1102 or Soc 1101 or #)
Theories and research in the study of interpersonal behavior. Role, self, social learning, exchange, person perception, cognitive consistency, and interpersonal transactions.

Psy 3511s. Applied Social Psychology. (SS; 2 cr; QP–3525 or # SP–3501 or #)
A specific topic among applied social psychology fields (e.g., health psychology, psychology of law, environmental psychology) will be explored. Emphasis will be placed on the use of theories and techniques learned in Psy 3501 for the purpose of understanding social issues and/or affecting change. Topics will be announced prior to registration.

Psy 3601s. Quantitative Methods in Psychology. (M/SR; 4 cr; QP–1203, Math 1150 or Math 3605; SP–1101-1102, Math 1601 or Math 2601)
Intermediate course in research design and data analysis. Analysis of variance, regression and correlation, non-parametric methods, use of microcomputer statistical packages.

Psy 3611s. History and Philosophy of Psychology. (Hist; 2 cr; not offered 2000-2001)
Historical roots and comparative features of major theoretical systems in psychology, including their viewpoints on scientific methodology, research interests, and techniques. Component variables, hypotheses, and laws of structural, functional, behavioristic, Gestalt, psychoanalytic, and existential movements and their modern syntheses.
Russian (Russ)

This discipline is in the Division of the Humanities. The purpose of the Russian curriculum is to introduce students to the language and culture of the Russian people. The program is designed to promote a global perspective by encouraging students to examine another culture primarily, but not exclusively, through its language. The introductory course satisfies the foreign language requirement.

Objectives—Students develop at an introductory level a number of skills in Russian: speaking, reading, listening, and writing. They gain an awareness of the structure of languages and an elementary facility with the Russian idiom.

Course Descriptions

Rus 1001f. Beginning Russian I. (FL; 4 cr)

Introduction to Russian as it is spoken and written presently. The course acquaints students with the basic sounds and vocabulary of Russian and enables them to understand, read, and write the language and to communicate in Russian about everyday situations. It makes them aware of the relationship between culture and language.

Rus 1002s. Beginning Russian II. (FL; 4 cr; QP – 1100, 1101 or placement or #; SP – 1001 or placement or #)

Continuation of 1001.

Secondary Education

(See Education, Secondary.)

Social Science Major

This interdisciplinary major is in the Division of the Social Sciences.

Objective—Students will understand how each social science discipline structures and advances knowledge, raises and answers analytical questions, and deals with competing theories and the changing nature of the field. Students develop an area of concentration in a single discipline or an interdisciplinary social science area.

Advising and Evaluation—Students work closely with their advisers to plan a program that satisfies the required competencies in a chosen area of concentration and in the social science disciplines.

Program—While the programs of individual students may vary, based upon arrangements approved by the divisional committee for the social science major, the minimum competencies required for each discipline normally may be achieved by completion of the following courses:

Psy 4101f,s. Helping Relationships. (SS; 4 cr; QP – 3400; SP – 3311)

Approaches to counseling and psychotherapy. Theories of helping relationships. Acquisition of helping skills, including attending behavior, reflection of feeling, paraphrasing, confrontation, and summarization. Major humanistic, cognitive, and behavioral approaches. Didactic instruction, observation of counseling and psychotherapeutic techniques, and practical experiences.

Psy 4610f. Empirical Investigations in Cognitive Psychology. (SS; 4 cr; repeatable; QP – 3210 or 3211; SP – 3111 or 3112)

Empirical investigations by students in any area covered by Cognitive Psychology I and II, as well as related areas. Includes lab.

Psy 4620f. Empirical Investigations in Biological Psychology. (Sci; 4 cr; repeatable; QP – 3320; SP – 3211)

Empirical investigations by students in any area covered by Biological Psychology, as well as related areas. Includes lab.

Psy 4630f. Empirical Investigations in Personality, Psychopathology, and Psychological Intervention. (SS; 4 cr; repeatable; QP – 3400; SP – 3311)

Empirical investigations in human emotion, motivation, individual differences, psychopathology, and psychological intervention. Includes lab.

Psy 4640f. Empirical Investigations in Developmental Psychology. (SS; 4 cr; repeatable; QP – 3500 or 3501 or 3502; SP – 3401 or 3402 or 3403, #)

Individual reading and empirical research on any topic. Objective is greater depth than is possible in Psy 3401, 3402, 3403 and demonstration of research competency. Includes lab.

Psy 4650f. Empirical Investigations in Social Psychology. (SS; 4 cr; repeatable; QP – 3525; SP – 3501 or #)

Seminar instruction on topics of student and staff interests. Students will complete an empirical project and paper. Includes lab.

Psy 4896f,s. Field Experiences in Psychology. (SS [if taken for 2 or more cr]; 1-4 cr; repeatable; only 4 cr may be applied to the BA or the Psy major; QP – #, which normally requires 3425 for work in psychiatric settings; 3400 or 3500 or 3502 for work in schools; SP – #, which normally requires 4101 for work in psychiatric settings; 3301, 3311, 3401 or 3402 for work in schools; S-N only)

Individually arranged, supervised observation of and assistance with activities of professional psychologists in schools, clinics, hospitals, and other field settings.

Psy 1993f,s. Directed Study. (1-5 cr; repeatable; prereq #)

Individualized instruction for advanced undergraduates. Content and manner of instruction depends on interests of students and faculty. Individual research and reading projects in selected areas supervised by faculty members as well as seminars concerned with in-depth exploration of topics of current interest; topics to be announced.

Psy 4994f,s. Senior Honors Project. (1-5 cr; repeatable; prereq participation in Honors Program, #)

A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM "with honors."
Anth 1111—Introductory Cultural Anthropology
Econ 1101—Principles of Economics
Econ 1951—Seminar for Social Science Majors
Geog 1001—Problems in Geography
Hist 1301—Introduction to United States History
Pol 1201—American Government and Politics
Psy 1051—Introduction to Psychology
Soc 1101—Introductory Sociology
Math 1601—Introduction to Statistics or equivalent

**Course Descriptions**

**Anth 1111F,S. Introductory Cultural Anthropology.** (SS; 4 cr)
Varieties and range of human behavior as revealed through the comparative study of cultures throughout the world. Concepts developed by anthropologists to explain both the unity and diversity of humankind.

**Econ 1101F,S. Principles of Economics.** (SS; 4 cr; prereq high school algebra or #)
Introduction to the study of scarce resource allocation in a market economy. Supply and demand, consumer theory, the theory of the firm, market structure, pricing of the factors of production. Measurement of economic performance; national income, inflation, and unemployment; competing macroeconomic theories; stabilization policies.

**Econ 1951F,S. Seminar for Social Science Majors.** (1 cr; OP—1101, 1102; SP—1101; no cr for students who are concurrently enrolled in or have received cr for 3xxx Econ courses; S-N only)
Familiarization with various journals, periodicals, and sources of statistical information that deal with current developments in economics.

**Geog 1001S. Problems in Geography.** (Envt; 4 cr; offered when feasible)
Basic concepts and questions of geography. The terminology of geography; some modern trends in geography; interpretation of geographical data; select problems of human, physical, economic, and cultural geography.

**Geog 3111. Geography of Minnesota.** (Envt; 4 cr; prereq # offered when feasible)
The changing geography of Minnesota and the upper Midwest. Legacy from the railroad era, transformation into the auto-air age, the emerging future.

**Hist 1301F. Introduction to U.S. History.** (Hist; 4 cr)
Methods, themes, and problems in the study of the history of the United States.

**Math 1601F,S. Introduction to Statistics.** (M/SR; 4 cr; prereq high school higher algebra)
Scope, nature, tools, language, and interpretation of elementary statistics. Descriptive statistics; graphical and numerical representation of information; measures of location, dispersion, position, and dependence; exploratory data analysis. Elementary probability theory, discrete and continuous probability models. Inferential statistics, point and interval estimation, tests of statistical hypotheses. Inferences involving one and two populations, ANOVA, regression analysis, and chi-squared tests; use of statistical computer packages.

**Pol 1201F,S. American Government and Politics.** (E/CR; 4 cr)
Analysis of principles, organization, procedures, and powers of government in the United States. The federal system, national constitution, civil and political rights, party system; nature, structure, powers, and procedures of legislative, executive, and judicial departments of the national government.

**Psy 1051F. Introduction to Psychology.** (SS; 4 cr)
An introduction to the science of mind and behavior intended for those not planning to major in psychology; does not count toward the requirements of the psychology major and is insufficient as a prerequisite for psychology lab courses. Topics include history of the field, biological bases for behavior, life span development, memory, cognition, learning, social processes, personality, and psychopathology. Includes laboratory/discussion sessions.

**Soc 1101F,S. Introductory Sociology.** (SS; 4 cr)
Basic concepts, theories, and methods of sociology; survey of some of the institutional areas in which sociologists specialize.

**Sociology (Soc)**

This discipline is in the Division of the Social Sciences.

**Objectives**—The sociology curriculum (with support from anthropology courses) is designed to acquaint students with the concerns, theories, and methods of the science that deals with groups, culture, and interpersonal relations of human beings. In addition to an introduction to sociology as a science, an effort is made to relate human values broadly to the theories, methods, and data of sociology. The courses are designed to meet the needs of liberal arts students as well as students preparing for graduate school.

**Major Requirements**

a minimum of 36 credits in sociology and anthropology. 28 of which must be in 2xxx, 3xxx, and 4xxx courses and which must include:

- Soc 1101—Introductory Sociology
- Soc 3101—Research Methodology I
- Soc 4991—Independent Project Seminar
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**Sociology**

**Minor Requirements**

A sociology minor consists of:

- a minimum of 6 courses (24 credits), including:
  - Soc 1101 — Introductory Sociology
  - either Soc 3101 — Research Methodology I
  - or Soc 3401 — Contemporary Sociological Theory

- three electives

- Soc 4991 — Independent Project Seminar is highly recommended

**Teacher Preparation Requirements**

Students seeking teacher licensure in any of the social sciences must complete a social science major and the required professional education courses and student teaching in social studies. Required courses may not be taken S-N unless offered S-N only.

**Course Descriptions**

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**Soc 1101f,s. Introductory Sociology. (SS; 4 cr)**

Basic concepts, theories, and methods of sociology; survey of some of the institutional areas in which sociologists specialize.

**Soc 2101f. Prejudice, Discrimination, and Systems of Oppression.** (HDiv; 4 cr; QP — 1100 or Anth 1110; SP — 1101 or Anth 1111)

Patterns of group dominance, exploitation, and hate in the United States and globally. Emphasis on sexism, racism, and homophobia with some attention to other systems of oppression such as ageism and ableism.

**Soc 2300f,s. Variable Topics in Latin American Cultures and Societies.** (IP; 4 cr; repeatable when topic changes; QP — 1100 or Anth 1110; SP — 1101 or Anth 1111)

Same as Anth 2300. Use of archaeological, historical, and contemporary materials. Topics may include political institutions, media, popular culture, ethnicity, class, ecology, and cultures.

**Soc 2301f. Social Change and Development in Latin America.** (IP; 4 cr; QP — 1100 or Anth 1110; SP — 1101 or Anth 1111)

**Soc 2302s. Women in Latin America.** (IP; 4 cr; QP — 1100 or Anth 1110; SP — 1101 or Anth 1111)

**Soc 2451f. 20th-Century Native Americans.** (HDiv; 4 cr; QP — 1100 or Anth 1111; SP — 1101 or Anth 1111)

Same as Anth 2451. The cultures, problems, and resurgence of Native Americans in the 20th century. Government policies; education, religion, self-determination, family, gaming, etc.

**Soc 3101f. Research Methodology I.** (4 cr; QP — 1100; SP — 1101)

Introduction to research procedures used in sociology, including sociological statistics. Overview of both quantitative and qualitative techniques in context of professional sociological research and student research design. Development of research design. Questions of validity and reliability examined in the context of professional sociological research and student research design.

**Soc 3102s. Research Methodology II.** (4 cr; QP — 3230; SP — 3101)

Practical issues in sociological research; quantitative research project design, execution, and analysis, reporting and presentation; SPSS data analysis.

**Soc 3111s. Sociology of Modernization.** (IP; 4 cr)

Process of modernization in non-Western societies. Social, economic, and political impact of modernization from different theoretical perspectives. Assessment of those theoretical perspectives as a means to understand dynamics of change in Third World countries.

**Soc 3121f. Sociology of Gender.** (HDiv; 4 cr; QP — 1100 or Anth 1110; SP — 1101 or Anth 1111)

Relationships among sex, gender, and society. Gender as a factor in stratification systems, social interaction, and institutions such as the economy, the family, and religion.

**Soc 3131f. World Population.** (Envt; 4 cr; QP — 1100; SP — 1101)

Population theory and demographic method. Dynamics of fertility and mortality as the basis of population forecasting and its policy implications. Emphasis on the tie between Third World demographic trends and population issues in the rest of the world.

**Soc 3141f. Sociology of Deviance.** (E/CR; 4 cr; QP — 5 cr in Soc; SP — 4 cr in Soc)

Theoretical and empirical issues recurring in the sociological literature on deviant behavior.

**Soc 3200s. Variable Topics in Social Stratification.** (HDiv; 4 cr; repeatable when topic changes; QP — 1100 or Anth 1110; SP — 1101 or Anth 1111; not offered 1999-2000)

Hierarchies of power, wealth, and prestige; analysis of various theories of stratification. Class, status, race, minorities (e.g., African Americans, American Indians), caste, and gender evaluated in terms of stratification.

**Soc 3250f,s. Variable Topics in Social Structure.** (See specific topics for general education categories; 4 cr; repeatable when topic changes; QP — 1100 or Anth 1110; SP — 1101 or Anth 1111)

In-depth study of one topic in sociology such as African American social institutions, the economic and social elite, bureaucracy, urban communities, social control, population, and demography.

**Soc 3251f. African Americans.** (HDiv; 4 cr; QP — 1100 or Anth 1110; SP — 1101 or Anth 1111)

**Soc 3252s. Women in Muslim Society.** (IP; 4 cr; QP — 1100 or Anth 1110; SP — 1101 or Anth 1111)

**Soc 3300s. Variable Topics in Area Studies.** (IP; 4 cr; repeatable when topic changes; QP — 1100 or Anth 1110;
Division Structure and Course Descriptions

Spanish (Span)

This discipline is in the Division of the Humanities. It promotes a global perspective by encouraging students to take a close look at another culture and in this way become aware of both the diversity and similarity among all people.

Objectives—The Spanish curriculum offers coursework in Hispanic culture, language, and literature. The courses are designed to help students develop critical insight into the philosophy and values of another culture, fluency in a second language, and sensitivity toward literature that reflects the experience of the Spanish-speaking world. The curriculum accommodates liberal arts students interested in a cross-cultural perspective, language study, secondary school teaching, or preparation for graduate study in the field.

Major Requirements
Span 2001—Intermediate Spanish I
Span 2002—Intermediate Spanish II or equivalent
Span 3001—Advanced Spanish I
Span 3002—Advanced Spanish II
Span 3101—Introduction to Spanish Literature
Span 3201—Masterpieces of Spanish Peninsular Literature I
Span 3202—Masterpieces of Spanish Peninsular Literature II
Span 3301—Masterpieces of Latin American Literature I
Span 3302—Masterpieces of Latin American Literature II

one additional course from:
Span 3400—Variable Topics in Latin American Literature
Span 3500—Variable Topics in Spanish Peninsular Literature

a foreign study experience and regular use of the language laboratory are strongly recommended to maintain language skills

Latin American area studies courses are also recommended

Courses with grades of D may not be used to meet the major requirements.

Minor Requirements
Span 2001—Intermediate Spanish I
Span 2002—Intermediate Spanish II or equivalent
Span 3001—Advanced Spanish I
Span 3002—Advanced Spanish II
Span 3101—Introduction to Spanish Literature

three additional literature courses from:
Span 3201—Masterpieces of Spanish Peninsular Literature I
Span 3202—Masterpieces of Spanish Peninsular Literature II

Minor Requirements

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Span 2001—Intermediate Spanish I
Span 2002—Intermediate Spanish II or equivalent
Span 3001—Advanced Spanish I
Span 3002—Advanced Spanish II
Span 3101—Introduction to Spanish Literature
Span 3201—Masterpieces of Spanish Peninsular Literature I
Span 3202—Masterpieces of Spanish Peninsular Literature II

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Span 2002—Intermediate Spanish II or equivalent
Span 3001—Advanced Spanish I
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Span 3101—Introduction to Spanish Literature
Span 3201—Masterpieces of Spanish Peninsular Literature I
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Minor Requirements
Span 2001—Intermediate Spanish I
Span 2002—Intermediate Spanish II or equivalent
Span 3001—Advanced Spanish I
Span 3002—Advanced Spanish II
Span 3101—Introduction to Spanish Literature

three additional literature courses from:
Span 3201—Masterpieces of Spanish Peninsular Literature I
Span 3202—Masterpieces of Spanish Peninsular Literature II

Minor Requirements

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Span 2002—Intermediate Spanish II or equivalent
Span 3001—Advanced Spanish I
Span 3002—Advanced Spanish II
Span 3101—Introduction to Spanish Literature

three additional literature courses from:
Span 3201—Masterpieces of Spanish Peninsular Literature I
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Minor Requirements

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Span 2001—Intermediate Spanish I
Span 2002—Intermediate Spanish II or equivalent
Span 3001—Advanced Spanish I
Span 3002—Advanced Spanish II
Span 3101—Introduction to Spanish Literature

three additional literature courses from:
Span 3201—Masterpieces of Spanish Peninsular Literature I
Span 3202—Masterpieces of Spanish Peninsular Literature II
Courses with grades of D may not be used to meet the minor requirements.

**Teacher Preparation Requirements**

Spanish majors and minors must complete required professional education courses, including methods (LanE 4103—Methods of Teaching Foreign Language in the Secondary School) and student teaching in Spanish. Students seeking teaching licensure must also demonstrate their proficiency in Spanish by examination. The examination is administered by the discipline and covers the skills of reading, writing, listening, and speaking. A foreign study experience and regular use of the language lab are recommended to maintain language skills. Latin American area studies courses are also recommended. Required courses may not be taken S-N unless offered S-N only.

**Required Proficiency/Placement Examination**—Students who plan to complete courses in the same language that they studied in high school must take the proficiency/placement examination and abide by the placement recommendation. If, after an initial exposure to the recommended course, the placement seems inappropriate, students may follow the recommendation of their language instructor as to the proper entry course.

**Students not Majoring or Minoring in Spanish**

For an in-depth cultural emphasis, students should complete:

- Span 1001—Beginning Spanish I
- Span 1002—Beginning Spanish II or equivalent
- Span 2001—Intermediate Spanish I
- Span 2002—Intermediate Spanish II
- Span 3001—Advanced Spanish I
- Span 3002—Advanced Spanish II

For an in-depth language emphasis, students should complete:

- Span 1001—Beginning Spanish I
- Span 1002—Beginning Spanish II or equivalent
- Span 2001—Intermediate Spanish I
- Span 2002—Intermediate Spanish II
- Span 3001—Advanced Spanish I
- Span 3002—Advanced Spanish II

A foreign study experience, special projects in language, and regular use of the language lab are recommended to maintain language skills.

**Course Descriptions**

*Note:* Students may not receive credit twice for a course that is offered in both English and Spanish.

**Span 1001f. Beginning Spanish I. (FL; 4 cr)**

Study of basic skills of Spanish (reading, speaking, writing, listening) and cultural contexts of Latin America and Spain. Students should demonstrate the ability to: read and comprehend materials such as ads, instructions, etc.; engage in simple conversations in Spanish, to speak about themselves and express their basic needs; construct sentences and questions in Spanish in order to write accurately at the short paragraph level; comprehend short conversations.

**Span 1002s. Beginning Spanish II. (FL; 4 cr; QP—1 qtr of Span or placement; SP—1001 or placement or #)**

Second course in the sequence beginning with 1001.

**Span 2001f. Intermediate Spanish I. (IP; 4 cr; QP—3 qtrs of Span or placement; SP—1002 or placement or #)**

Review and building of skills with a focus on basic Spanish language structures and tenses. Students should demonstrate the ability to read critically and understand the context of literary and cultural items; respond to simple questions, avoid basic pronunciation errors, engage in short conversations, discuss assigned themes at some length; write accurately at the paragraph level, avoiding common grammatical errors; comprehend conversations.

**Span 2002s. Intermediate Spanish II. (IP; 4 cr; QP—1 qtr intermediate Span or #; SP—2001 or placement or #)**

Review and building of skills in more complex language structures, tenses, and moods. Students should demonstrate the ability to read with some basic literary analysis and analyze cultural differences; read out loud with understanding, speak in emotive and persuasive language contexts, hold conversations, speak extemporaneously on assigned topics; write analytically and accurately at the short paper level; comprehend short dialogues and paragraphs.

**Span 3001f. Advanced Spanish I. (IP; 4 cr; QP—3 qtrs intermediate Span)**

Study of complex language structures, expansion and reinforcement of grammar constructions, and analysis of literary and/or cultural readings. Students should demonstrate the ability to carefully read, comprehend, and analyze literary works and/or cultural readings; discuss motives and themes in such works, read out loud with proficiency and meaning, hold sustained conversations; use correct grammar to write and present compositions analyzing the works; comprehend main points in Scola televised presentations and materials.
Span 3002s. Advanced Spanish II. (IP; 4 cr; QP–1 qtr advanced Span; SP–3001, ¶3101) Second course in the sequence beginning with 3001.

Span 3101s. Introduction to Spanish Literature. (Hum; 4 cr; QP–1 qtr advanced Span; SP–2002, ¶3002) Study of a variety of literary genres representing the literature of Spain and Latin America; rudiments of literary analysis and interpretation. Students should demonstrate the ability to read and comprehend the literary works studied, analyze works critically while developing a sensitivity toward certain cultural aspects and literary nuances expressed therein; participate in and comprehend sustained class discussion with respect to certain topics or themes; write with accuracy in Spanish and show some degree of analytical proficiency at the short paper level.

Span 3201f. Masterpieces of Spanish Peninsular Literature I. (Hum; 4 cr; QP–3 qtrs advanced Span, 1 qtr 3101; SP–3001, 3002, 3101) Masterpieces from the Generation of 1898 and the Contemporary Period. Students should demonstrate the ability to analyze literary texts, using the text as well as the aesthetic, political, historical, and philosophical context in which the work was produced. Students must also demonstrate the ability to discuss in class the ideas of the texts and the context, and they must write papers with grammatical precision and rigorous research.

Span 3202s. Masterpieces of Spanish Peninsular Literature II. (Hum; 4 cr; QP–3 qtrs advanced Span, 1 qtr 3101; SP–3201) Masterpieces from Medieval, Renaissance, Golden Age, 18th century, and 19th century. Students should demonstrate the ability to analyze literary texts, using the text as well as the aesthetic, political, historical, and philosophical context in which the work was produced. Students must also demonstrate the ability to discuss in class the ideas of the texts and the context, and they must write papers with grammatical precision and rigorous research.

Span 3301f. Masterpieces of Latin American Literature I. (Hum; 4 cr; QP–3 qtrs advanced Span, 1 qtr 3101; SP–3002, 3101) Masterpieces from Latin America in the 20th century. Students should demonstrate the ability to analyze literary texts, using the text as well as the aesthetic, political, historical, and philosophical context in which the work was produced. Students must also demonstrate the ability to discuss in class the ideas of the texts and the context, and they must write papers with grammatical precision and rigorous research.

Span 3302s. Masterpieces of Latin American Literature II. (Hum; 4 cr; QP–3 qtrs advanced Span, 1 qtr 3101; SP–3002, 3101) Masterpieces from Latin America from 1492 to 1900. Students should demonstrate the ability to analyze literary texts, using the text as well as the aesthetic, political, historical, and philosophical context in which the work was produced. Students must also demonstrate the ability to discuss in class the ideas of the texts and the context, and they must write papers with grammatical precision and rigorous research.

Span 3400s. Variable Topics in Latin American Literature. (Hum; 4 cr; repeatable when topic changes; QP–3 qtrs advanced Span, 1 qtr 3101; SP–3002, 3101) Topic to be announced. Students should demonstrate the ability to analyze literary texts, using the text as well as aesthetic, political, historical, and philosophical context in which the work was produced. Students must also demonstrate the ability to discuss in class the ideas of the texts and the context, and they must write papers with grammatical precision and rigorous research.

Span 3500f. Variable Topics in Spanish Peninsular Literature. (Hum; 4 cr; repeatable when topic changes; QP–3 qtrs advanced Span, 1 qtr 3101; SP–3002, 3101) Topic to be announced. Students should demonstrate the ability to analyze literary texts, using the text as well as the aesthetic, political, historical, and philosophical context in which the work was produced. Students must also demonstrate the ability to discuss in class the ideas of the texts and the context, and they must write papers with grammatical precision and rigorous research.

Span 4993f,s. Directed Study. (1-5 cr; repeatable; prereq #) Span 4994f,s. Senior Honors Project. (1-5 cr; repeatable; prereq participation in Honors Program, #) A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

Speech Communication (Spch)
This discipline is in the Division of the Humanities. The speech communication curriculum is designed to introduce UMM students to the study of the multidimensional nature of oral communication, including rhetoric, human communication, and electronic mass media; to promote the skills of lifelong learning as producers and consumers of messages; to develop in students the capabilities for active involvement in a participatory democracy.

Objectives—Students develop a historical and theoretical understanding of the three areas of speech communication: rhetoric, communications, electronic mass media. Students use a variety of assigned theoretical approaches appropriate to these three areas to describe and evaluate assigned or chosen discourse.

Students participate in a variety of oral communication assignments using informative and persuasive speaking techniques effectively.

Major Requirements

Prerequisite/Foundation Course
Spch 2101—Introduction to Speech Communication

Major Core Courses
Spch 3101—History of Rhetoric From the Classical to Modern Periods
Spch 3301—Media Theory, Criticism, and Problems
Spch 3401—Human Communication Theory

Division Structure and Course Descriptions

128
one course from:
Spch 3111—History of Rhetoric in the Contemporary Period
Spch 3200—Variable Topics in Public Address

one course from:
Spch 3311—Social Uses of the Media
Spch 3321—Television Broadcasting

one course from:
Spch 3411—Intercultural Communication Theory and Research
Spch 3421—Organizational Communication Theory and Research

one course from:
Spch 4151—Argumentation: Theory and Practice
Spch 4201—Persuasion: Receiver Analysis

Elective
One additional 3xx or 4xx Spch course.

Senior Seminar
Seniors must complete one from:
Spch 4901—Speech Communication Seminar
or a designated topics course approved by the speech communication discipline:
Spch 4000—Variable Topics in Speech Communication
Spch 4100—Variable Topics in Freedom of Speech

Minor Requirements
Spch 2101—Introduction to Speech Communication

one course from:
Spch 4151—Argumentation: Theory and Practice
Spch 4201—Persuasion: Receiver Analysis

one course from:
Spch 3101—History of Rhetoric From the Classical to Modern Periods
Spch 3111—History of Rhetoric in the Contemporary Period
Spch 3200—Topics in Public Address

one course from:
Spch 3301—Media Theory, Criticism, and Problems
Spch 3311—Social Uses of the Media
Spch 3321—Television Broadcasting

one course from:
Spch 3401—Human Communication Theory
Spch 3411—Intercultural Communication Theory and Research
Spch 3421—Organizational Communication Theory and Research

Course Descriptions
Spch 1000f. Variable Topics in Introduction to Public Speaking. (E/CR; 4 cr)
Theory and practice within specific speaking situations that use various arguments, e.g., presentational, deliberative, or forensic.

Spch 1051f,s. Introduction to Public Speaking. (E/CR; 4 cr)
Public address and directed practice in a variety of speech situations.

Spch 1061f. Interpersonal Communication. (SS; 4 cr)
Studies of variables in dyadic communication to create understanding of the student’s own communication patterns.

Spch 1071f. Introduction to Groups: Principles and Practices. (SS; 4 cr)
Group theory and directed practice in a variety of group situations, e.g., panels, symposia, and forums.

Spch 2101s. Introduction to Speech Communication. (Hum; 4 cr)
A survey of the field of study that has emerged around the oral communication tradition. Students learn the history, theories, and contexts of communication study that prepare them for upper-division courses.

Spch 3101f. History of Rhetoric From the Classical to Modern Periods. (IP; 4 cr; QP–1101 or #; SP–2101 or #)
Rhetoric from the classical theories of Corax and Tisias, Aristotle, and Cicero to the modern theories of Blair, Campbell, and Whately.

Spch 3111s. History of Rhetoric in the Contemporary Period. (Hum; 4 cr; QP–1101 or #; SP–2101 or #)
Detailed study of the development of contemporary rhetorical theory, with particular emphasis placed on the use of those theories in the development of rhetorical criticism.

Spch 3200f. Variable Topics in Public Address. (Hum; 4 cr; repeatable when topic changes; QP–1101 or #; SP–2101 or #)
Analysis and evaluation of situated discourse. Topics may include British and American public address, inaugurals, rhetorical practice of non-dominant cultural groups.

Spch 3301s. Media Theory, Criticism, and Problems. (SS; 4 cr; QP–1101 or #; SP–2101 or #)
Theories, research studies, current trends, and various critical approaches to examine and explain the reflexive relationships between media and society.

Spch 3311s. Social Uses of the Media. (E/CR; 4 cr; QP–1101 or #; SP–2101 or #)
Participation in the planning, production, and performance of television projects designed to serve various publics, such as campus units or the community.

Spch 3321f. Principles of Television Broadcasting. (Hum; 4 cr; QP–1101 or #; SP–2101 or #)
Basic theories and practice: equipment, procedures, and skills associated with writing for and the production of televised broadcasting. Lectures, studio projects, class critiques.

Spch 3401f. Human Communication Theory. (SS; 4 cr; QP–1101 or #; SP–2101 or #)
Perspectives on human communication, including the mechanistic, psychological, symbolic interactionist, and pragmatic. Focuses on approaches to social interaction. Provides general foundation and historical background of communication theory.

Spch 3411f. Intercultural Communication Theory and Research. (HDiv; 4 cr; QP–1101 or #; SP–2101 or #)
Study of intercultural communication from an interpersonal and group perspective. Includes qualitative and quantitative methods.
**Spch 3421s. Organizational Communication Theory and Research.** (SS; 4 cr; QP-1101 or #; SP-2101 or #)
Study of organizational communication, including small group perspectives. Includes qualitative and quantitative methods.

**Spch 4000. Variable Topics in Speech Communication.** (4 cr; repeatable when topic changes; QP-1101 or #; SP-2101 or #; offered when feasible)
Varying topics relating to speech communication that are not ordinarily included in other speech communication courses.

**Spch 4100f. Variable Topics in Freedom of Speech.** (IP; 4 cr; repeatable when topic changes; not offered 1999-2000)
Topics may include freedom of speech in the schools, history of free speech, or the contribution of a single Supreme Court justice to the development of free speech. Emphasis on reading and discussion of Supreme Court decisions.

**Spch 4151f. Argumentation: Theory and Practice.** (Hum; 4 cr; QP-1101 or #; SP-2101 or #)
A study of rhetorical argument design and evaluation. Students will analyze and critique arguments, as well as plan and present formal speeches.

**Spch 4201s. Persuasion: Receiver Analysis.** (Hum; 4 cr; QP-1101 or #; SP-2101 or #)
Investigation of persuasion theory and research from rhetorical and social science perspectives. Students will analyze particular instances of persuasive attempts.

**Spch 4800f,s. Directed Experience in Teaching Speech Communication.** (1-4 cr; repeatable to 8 cr; prereq #; S-N only)
Practice as facilitators in the introductory-level speech courses; weekly seminar sessions focus on method, planning, and problems in speech communication instruction.

**Spch 4901s. Speech Communication Seminar.** (Hum; 4 cr; prereq sr or #)
Capstone experience for majors in which students plan and conduct a project of original study that investigates a question about communication. Students select their own research methodology and implement it, presenting their findings in written and oral presentations.

**Spch 3993f,s, 4993f,s. Directed Study.** (1-5 cr; repeatable; prereq #)
A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

### Theatre Arts (Th)

This discipline is in the Division of the Humanities. The discipline encompasses theatre as an artistic form and as a social and cultural institution. The study of theatre arts enables the individual to develop a creative imagination, an inquiring mind, a sense of social responsibility, professional discipline, a collaborative attitude, artistic standards and judgment, and a respect for the art form.

**Objectives**—The curriculum provides sound academic and practical training in theatre arts for undergraduate liberal arts students, for those wishing to pursue graduate studies in the field, and for those preparing to teach. It is designed to help students develop an appreciation for and ability to produce quality theatre.

**Major Requirements**

**Th 1101—The Theatre Experience: An Introduction**
Th 1111—Fundamentals of Acting
Th 1301—Fundamentals of Design
Th 2101—Fundamentals of Directing
Th 2301—Stagecraft
Th 3101—World Theatre: History and Literature I
Th 3102—World Theatre: History and Literature II
Th 3201—Acting and Directing I
or Th 3202—Acting and Directing II
Th 4901—Senior Project
or Th 4994—Senior Honors Project

**one course from:**
Th 2201—Voice and Movement
Th 2211—Oral Interpretation
Th 2221—Readers’ Theatre
Th 3201—Acting and Directing I
Th 3202—Acting and Directing II
Th 3301—Stage Lighting
Th 3302—Stage Costuming
Th 3303—Computer-Assisted Drawing
Th 4301—Scenic Design

six major production responsibilities (three of which must be in a faculty-directed production and three of which must be in the junior and senior years)
a portfolio review in the junior year
at least one para-programmatic theatre experience that is arranged through a theatre arts faculty member and may take any number of forms, e.g., an internship with a theatre company, study abroad, or theatre tour to New York or London

Up to 4 credits of coursework with a grade of D may be used to meet the major requirements if offset by an equivalent number of credits of A or B.

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**Studio Art (ArtS)**

(See Art, Studio.)

**Teacher Education Programs**

(See Education; Education, Elementary; and Education, Secondary.)
Minor Requirements
Th 1101—The Theatre Experience: An Introduction
Th 1111—Fundamentals of Acting
Th 1301—Fundamentals of Design
Th 2101—Fundamentals of Directing
Th 2301—Stagecraft

at least three courses from:
Th 2201—Voice and Movement
Th 2211—Oral Interpretation
Th 2221—Readers’ Theatre
Th 3101—World Theatre: History and Literature I
Th 3102—World Theatre: History and Literature II
Th 3201—Acting and Directing I
or Th 3202—Acting and Directing II
Th 3301—Stage Lighting
Th 3302—Stage Costuming
Th 3303—Computer-Assisted Drawing
Th 4301—Scenic Design

three major production responsibilities, at least two to be completed in the junior and senior years

Up to 4 credits of coursework with a grade of D may be used to meet the minor requirements if offset by an equivalent number of credits of A or B.

Teacher Preparation Requirements
Theatre arts majors must complete:
the theatre arts major, including:
Th 2211—Oral Interpretation
Spch 3311—Social Uses of the Media

required professional education courses, including methods (SThE 4103—Methods of Teaching Speech and Theatre Arts in the Secondary School) and student teaching in theatre arts

Theatre arts minors must complete:
the theatre arts minor, including:
Th 2101—Fundamentals of Directing
Th 2211—Oral Interpretation
Th 3101—World Theatre: History and Literature I
Th 3201—Acting and Directing I
Spch 3311—Social Uses of the Media

required professional education courses, including methods (SThE 4103—Methods of Teaching Speech and Theatre Arts in the Secondary School) and student teaching in theatre arts

Course Descriptions
Th 1040f. Backstage on Broadway. (1 cr; repeatable to 4 cr; prereq # S-N only)
Supervised field trip to New York; attending selected professional theatre productions; backstage tours; discussions with theatre professionals.

Th 1050f. London Theatre Tour. (1 cr; repeatable to 4 cr; prereq # S-N only)
Supervised field trip to London, England; attending selected professional theatre productions; backstage tours; discussions with theatre professionals.

Th 1060f.s. Theatre Practicum. (ArtP; 1 cr; repeatable to 8 cr; prereq # S-N only)
Participation in some aspect of theatre production, other than acting (e.g., scenery, props, costumes, lighting).

Th 1070f.s. Theatre Performance. (ArtP; 1 cr; repeatable to 8 cr; prereq # S-N only)
Participation in theatrical production as an actor.

Th 1101f. The Theatre Experience: An Introduction. (FA; 4 cr)
Fundamental examination and practical application of the theory, history, and practice of theatrical performance as a reflection of society. Focus is on the theatre event as a collaborative effort and transitory art form. (lect, 2 hrs practicum)

Th 1111f. Fundamentals of Acting. (ArtP; 4 cr; QP-1500, theatre arts major or minor; SP-1101, theatre arts major or minor or #)
Approaches characterization from a physical and psychological view. Focus is on use of imagination, text analysis, body and voice to develop characters from modern realistic dramatic literature.

Th 1301f. Fundamentals of Design. (ArtP; 4 cr)
Problem-solving approach to elements, principles, and functions of design; their place in the theatre and elsewhere. (3 hrs lect, 2 hrs studio)

Th 2101s. Fundamentals of Directing. (4 cr; QP-1500, 1700, theatre arts major or minor; SP-1111, theatre arts major or minor or #)
Introduces the practical components of the director as artist, teacher, and collaborator. Focus is on the craft of directing modern realistic dramatic literature through text analysis, communication of concepts, and stylistic techniques.

Th 2111f. Creative Drama With Children. (FA; 4 cr; QP-1500 or elem ed major; SP-1101 or elem ed major or #; offered when feasible)
The course develops classroom skills in the use of dramatic techniques to teach a broad range of subjects to children. Exercises, presentations, and experiential learning techniques will be modeled and practiced in class.

Th 2201f. Voice and Movement. (ArtP; 4 cr; QP-1500, 1700, theatre arts major or minor; SP-1111, theatre arts major or minor or #)
Explores the use of the voice and the body as means for expression in performance and everyday communication. Focus is on expansion and enhancement of vocal and physical skills through release of tension, posture, vocal exercises, and muscle extension.

Th 2211s. Oral Interpretation. (ArtP; 4 cr)
Introduces the study of literature through text analysis and performance. Focus is on the student’s discovery of the aesthetic, communicative, and performative elements of a variety of personal narratives, prose, and poetry.

Th 2221f. Readers’ Theatre. (ArtP; 4 cr; QP-3750, Spch 1100 or Spch 1101; SP-2211)
Examines the theory and practice of adapting literature into group performance. Focus is on text analysis, script development, directing, and performing both dramatic and non-dramatic literary texts.
**Division Structure and Course Descriptions**

**Th 2301s. Stagecraft. (ArtP; 4 cr)**
Development of stagecraft from the Greeks to the present. Basic forms of stage scenery and their functions in the theatre. Tools, materials, and techniques employed in creating the visual environment of the stage. (4 hrs lect, 4 hrs practicum)

**Th 3000f. Variable Topics in Theatre Arts. (1-4 cr; repeatable when topic changes; prereq #; offered when feasible)**
Varying topics relating to theatre that are not ordinarily included in other theatre arts courses.

**Th 3101f. World Theatre: History and Literature I. (Hist; 4 cr; QP-1500; SP-1101)**
Theatrical practice and dramatic literature from origins through late 17th century, tracing the roots leading to, and influences on, early modern European theatre practice and dramatic literature, as well as examining select Asian, African, and/or pre-Columbian American theatrical practice.

**Th 3102s. World Theatre: History and Literature II. (Hist; 4 cr; QP-1500, 3500; SP-1101, 3101)**
Theatrical practice and dramatic literature from the late 17th century to the present, examining select Asian, African, and/or Western Hemisphere theatrical practice, as well as tracing the roots leading to, and influences on, current world theatre practice and dramatic literature.

**Th 3201f. Acting and Directing I. (4 cr; QP-1500, 1700, 3610; SP-1101, 1111, 2101)**
The course begins with acting and directing techniques based in psychological realism and moves to an introduction of selected historical styles often performed in today’s theatre. Styles to be examined will be chosen from a list including Ancient Greek, Elizabethan, Comedy of Manners, and 19th century melodrama.

**Th 3202s. Acting and Directing II. (4 cr; QP-1500, 1700, 3610; SP-1101, 1111, 2101)**
The course begins with acting and directing work in classical styles and goes on to develop an understanding of, and skills in, selected nonrealistic forms. Forms examined will be chosen from a list including absurdism, feminism, postmodernism, and expressionism.

**Th 3301s. Stage Lighting. (4 cr; QP-1810, 1850; SP-1301, 2301; not offered 1999-2000)**
History and development of lighting for the stage. Theory and concepts of lighting as a visual art and its function in the theatre. Lighting design as a creative process and practical solution of lighting design problems. Lighting equipment and its use.

**Th 3302s. Stage Costuming. (4 cr; QP-1810, 1850; SP-1301, 2301; not offered 2000-2001)**
History and development of stage costume. Theory and concepts of stage costuming as a visual art and its function in the theatre. Costume design as a creative process. Practical demonstrations of knowledge of design, history, and functions of stage costume.

**Th 3303f. Computer-Assisted Drawing. (FA; 4 cr)**
Theory and concepts of and practice in using a computer as a drawing and drafting tool.

**Th 4301s. Scenic Design. (4 cr; QP-1810, 1850; SP-1301, 2301)**
Designing scenery as an expressive environment for the theatre. Elements and functions of design and principles of composition. Problems in coordination and execution of design in the interpretation of dramatic literature using a variety of staging techniques. Study of various styles of historical and contemporary stage productions and theatre architecture through the writings and designs of such artists and theorists as Appia, Craig, Meyerhold, Jones, and Svoboda.

**Th 4901f,s. Senior Project. (2-4 cr; prereq theatre arts major, #)**
Culminating activity to demonstrate the student’s competence in some area of theatre arts. Projects may be completed independently (e.g., a research paper, a solo acting performance) or as part of a group effort. Acting, scenery, lighting, costume design, playwriting, and theatre history are some areas in which the project may be undertaken.

**Th 1993f,s, 2993f,s, 3993f,s, 4993f,s. Directed Study. (1-5 cr; repeatable; prereq #)**

**Th 4944f,s. Senior Honors Project. (1-5 cr; repeatable; prereq participation in Honors Program, #)**
A substantial scholarly or creative work (at the undergraduate level) within the discipline. Successful completion of the senior honors project is one of the requirements for graduating from UMM “with honors.”

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**Wellness and Sport Science (WSS)**

This discipline is in the Division of Education.

**Objectives**—Instruction in coaching for intercollegiate athletics, lifetime physical activity courses, and courses addressing various wellness issues are offered for students who desire to develop and maintain a healthy lifestyle. Preparation for employment as secondary school varsity athletic coaches is also offered.

Note: Coaching: The statement, “Varsity coaching requirements completed,” is added to the transcript of students who complete:

- WSS 1101—First Aid
- WSS 2102—Human Anatomy
- WSS 2111—Kinesiology
- WSS 2121—Prevention and Care of Injuries

**two credits from:**

- WSS 2201—Baseball Coaching
- WSS 2202—Basketball Coaching
- WSS 2203—Football Coaching
- WSS 2204—Softball Coaching
- WSS 2205—Track and Field Coaching
- WSS 2206—Volleyball Coaching
- WSS 2207—Wrestling Coaching
- WSS 2208—Soccer Coaching
- WSS 3201—Coaching Internship

**Course Descriptions**

**WSS 1051f,s. Fitness for Life. (2 cr; S-N only)**
Factors associated with a positive lifestyle, assessment of each individual’s current wellness status, and development of a personal lifetime program for improving one’s quality of life.
WSS 1052f,s. Societal Issues in Health and Wellness. (SS; 2 cr)
A study of how perceptions of society’s health and wellness issues affect our individual health/fitness choices.

WSS 1101f,s. First Aid. (1 cr)
Lectures, demonstrations, practical work in emergencies and first aid. Emphasis on accident prevention. American Red Cross responding to emergencies, and adult CPR certification is awarded upon successful completion of the course.

WSS 1200f,s. Variable Topics in Wellness Skills. (0.5-1 cr; repeatable when topic changes; each topic repeatable to 1 cr, except 1204; S-N only)
Lifetime fitness skill development. Only 4 credits may be applied toward the 120-credit minimum required for the bachelor of arts degree.

WSS 1201f. Beginning Swimming. (0.5 cr)
WSS 1202f,s. Intermediate Swimming. (0.5 cr)
WSS 1203s. Advanced Swimming. (0.5 cr)
WSS 1204f. Water Safety Instruction. (1 cr; QP=1203; SP=1203)
WSS 1205s. Lifeguard Training. (0.5 cr; QP=1203; SP=1203)
WSS 1211s. Badminton. (0.5 cr)
WSS 1212s. Basketball. (0.5 cr)
WSS 1213f. Golf. (0.5 cr)
WSS 1214f,s. Racquetball. (0.5 cr)
WSS 1215s. Skiing. (0.5 cr; alternates yrs with 1216; special fee required)
WSS 1216s. Skating. (0.5 cr; alternates yrs with 1215; special fee required)
WSS 1217f. Soccer. (0.5 cr)
WSS 1218s. Softball. (0.5 cr)
WSS 1219s. Strength Training. (0.5 cr)
WSS 1220f,s. Tennis. (0.5 cr)
WSS 1221f. Volleyball. (0.5 cr)

**Varsity Athletics**

All varsity athletics carry 0.5 credit and are repeatable to a total of 2 credits.

WSS 1401s. Varsity Baseball (M)
WSS 1402s. Varsity Basketball
WSS 1403. Varsity Cross Country (W)
WSS 1404f. Varsity Football (M)
WSS 1405s. Varsity Golf
WSS 1406s. Varsity Softball (W)
WSS 1407s. Varsity Tennis
WSS 1408s. Varsity Track and Field
WSS 1409s. Varsity Wrestling
WSS 1410f. Varsity Volleyball (W)
WSS 1411f. Varsity Soccer (W)

**Course Descriptions**

WSS 2000f,s. Variable Topics in Wellness and Sport Science I. (2 cr; repeatable when topic changes)
Topic selected annually from issues in wellness studies (e.g., stress management, nutrition, holistic health, and aging) and sport science (e.g., athletic training).

WSS 2102f. Human Anatomy. (3 cr; prereq soph)
Same as Biol 2102. Structure of human systems at their organ and cellular levels. (one 100-min lect, one 120-min lab)

WSS 2111f. Kinesiology. (Sci; 2 cr; QP=3110; SP=2102)
Practice and study of the scientific principles of movement; analysis of basic movement in sports and other physical activities.

WSS 2121s. Prevention and Care of Injuries. (2 cr; QP=3110, 3115; SP=2111)
Conditioning of athletes for interschool sports, safety measures, care and prevention of injuries in sports and other physical activities, and practical work in the athletic training room.

WSS 2201s. Baseball Coaching. (2 cr)
History, psychology, and theory of the game, techniques of coaching each position, rules, batting, practice and game organization, strategy, officiating.

WSS 2202f. Basketball Coaching. (2 cr)
History, psychology, and theory of the game, offensive and defensive formations, strategy, practice and game organization, officiating, rules, and techniques of coaching each position.

WSS 2203f. Football Coaching. (2 cr)
History, psychology, and theory of the game, offensive and defensive formations, strategy, practice and game organization, officiating, rules, techniques of coaching each position.

WSS 2204s. Softball Coaching. (2 cr; offered even yrs)
History, psychology, and theory of the game, techniques of coaching each position, rules, batting, practice and game organization, strategy, officiating.

WSS 2205s. Track and Field Coaching. (2 cr)
History, psychology, and theory of the sport, techniques for all track and field events, methods of coaching, practice and meet organization, strategy, rules, officiating.

WSS 2206f. Volleyball Coaching. (2 cr)
History, psychology, and theory of the game, offensive and defensive formations, strategy, practice and game organization, officiating, rules.

WSS 2207f. Wrestling Coaching. (2 cr)
History, psychology, and theory of the sport, techniques, and the unique abilities and skills that liberally educated individuals bring to analysis and problem solving in health care.

WSS 3000. Variable Topics in Wellness and Sport Science II. (See specific topics; 2-4 cr; repeatable when topic changes; offered alt yrs beginning fall 1999)
The educational objectives of these courses are realized through the use of materials from multiple disciplines. These courses emphasize the holistic nature of health care and the unique abilities and skills that liberally educated individuals bring to analysis and problem solving in health care.
Women’s Studies (WoSt)

This is an interdisciplinary minor under the authority of the vice chancellor for academic affairs and dean. The program is administered by the coordinator of women’s studies.

Objective—The purpose of this program is to explore the history, position, and roles of women as well as attitudes concerning women. The program is designed to acquaint students with the place of women in society and prepare them to deal with discrimination against women.

Minor Requirements include a minimum of 28 credits to include:
WoSt 1101—Introduction to Women’s Studies

one course from:
Hist 3700—Topical Themes in the History of Women
Hist 3750—The History of Women in the West
Psy 3051—The Psychology of Women

one course from:
Soc 3101—Prejudice, Discrimination, and Systems of Oppression
Soc 3121—Sociology of Gender
Soc 3200—Topics in Social Stratification
Soc 3252—Women in Muslim Society

one course from:
Econ 4101—Labor Economics I
Econ 4102—Labor Economics II
Pol 3503—Women in Politics Worldwide
Psy 3221—Behavioral Biology of Women

an additional 8-10 credits selected from the courses listed below

In the future, as the minor adviser deems appropriate, more courses may be added. Any directed study course for which an instructor is available is acceptable provided the subject matter is appropriate.

Students must submit a file of materials to demonstrate familiarity with different theoretical approaches to the study of women; the ability to analyze, interpret, and synthesize women’s studies materials; and an awareness of how a knowledge of women’s studies relates to the individual’s personal life and intellectual growth.

Students develop a coherent program of study in consultation with their minor advisers. Advisers are usually faculty with backgrounds or specialties related to women’s studies. It is suggested that students complete 4 credits of interdisciplinary internship (IS 3996—Interdisciplinary Internship). When the program and plan are approved by the advisers, they are forwarded to the chairperson of the Division of the Social Sciences for information.

Courses with grades of D may not be used to meet the minor requirements.

Note: Students planning to minor in women’s studies must register with the chairperson of the Division of the Social Sciences.

Course Descriptions

Econ 4101f. Labor Economics I, (HDiv; 2 cr; QP; 3101; SP–3201 or #)
Wage and employment determination. Distribution of earnings and earnings inequality by race and sex. Labor supply applications.

Econ 4102f. Labor Economics II, (SS; 2 cr; QP; 3101; SP–3201 or #)
Functioning and performance of the labor market. Heterodox explanations of labor market behavior. Labor demand applications.
Psy 4896f,s. Field Experiences in Psychology. (SS [if taken for 2 or more cr]; 1-4 cr; repeatable, but no more than 4 cr may be applied toward the 120 cr for the BA or toward the major requirements in Psy; QP—#, which will normally require 3425 for work in psychiatric settings, 3400 or 3500 or 3502 for work in schools; if #, which will normally require 4101 for work in psychiatric settings, 3301, 3311, 3401 or 3402 for work in schools; S-N only) Individually arranged, supervised observation of and assistance with activities of professional psychologists in schools, clinics, hospitals, and other field settings.

Soc 2101f. Prejudice, Discrimination, and Systems of Oppression. (HDiv; 4 cr; QP—1100 or Anth 1110; SP—1101 or Anth 1111) Patterns of group dominance, exploitation, and hate in the United States and globally. Emphasis on sexism, racism, and homophobia with some attention to other systems of oppression such as ageism and ableism.

Soc 3121f. Sociology of Gender. (HDiv; 4 cr; QP—1100 or Anth 1110; SP—1101 or Anth 1111) Relationships among sex, gender, and society. Gender as a factor in stratification systems, social interaction, and institutions such as the economy, the family, and religion.

Soc 3200s. Variable Topics in Social Stratification. (HDiv; 4 cr; repeatable when topic changes; QP—1100 or Anth 1110; SP—1101 or Anth 1111; not offered 1999-2000) Hierarchies of power, wealth, and prestige; analysis of various theories of stratification. Class, status, race, minorities (e.g., African Americans, American Indians), caste, and gender evaluated in terms of stratification.

Soc 3250f,s. Variable Topics in Social Structure. (See specific topics for general education categories; 4 cr; repeatable when topic changes; QP—1100 or Anth 1110; SP—1101 or Anth 1111) In-depth study of one topic in sociology such as African American social institutions, the economic and social elite, bureaucracy, urban communities, social control, population, and demography.

Soc 3252s. Women in Muslim Society. (IP; 4 cr; QP—1100 or Anth 1110; SP—1101 or Anth 1111) Includes sections on subjects like the biology of the sexes, discussions of gender, ideas and literature about women, women’s history, women’s economic and social conditions, etc. Faculty from many disciplines will teach this course; therefore the emphases will differ, but many different areas will be explored.

Hist 3700. Variable Topics in the History of Women. (See specific topics for general education categories; 4 cr; repeatable when topic changes; QP—1101 or 1102 or 1201; SP—1001 or 1002 or 1201 and WoSt 1101) Possible topics include a historical study of women and religion, a historical study of thought about American women, a cross-cultural study of the history of women.

Hist 3701s. Women and Religion: A History. (SS; 4 cr; QP—1101 or 1102 or 1201; SP—1001 or 1002 or 1201 and WoSt 1101) A historical discussion of women in non-Western and Western religions.

Hist 3702f. The History of Women in the West. (HDiv; 4 cr; QP—Hist 1101, Hist 1102, Hist 1301; SP—WoSt 1101 or Hist 1101, Hist 1102, Hist 1301; not offered 2000-2001) Focuses on the intellectual as well as political, social, and economic history of pre-European, western European, and American women.

Pol 3500s. Variable Topics in Comparative Politics. (See specific topics for general education categories; 4 cr; repeatable when topic changes; QP—1100; SP—1101 or #) In-depth analysis of major government systems from regions of the world other than Europe or issues in comparative public policy, e.g., comparing social welfare budgetary priority across nation-states.

Pol 3503s. Women in Politics Worldwide. (IP; 4 cr; QP—1200, 1300; SP—1201, 2101 or #; not offered 1999-2000) Examines the ways gender influences politics throughout the world. Topics covered include: the “gender gap” and voter turnout, women’s involvement in linkage organizations, such as parties and interest groups, and finally policy outcomes regarding women in different kinds of political systems.

Psy 1071f. Human Sexuality. (SS; 4 cr) Survey of aspects of human sexuality, including intimacy and communication; male and female anatomy, physiology, and response; development of identity, sex role, and gender orientation; varieties of sexual expression; pregnancy and childbirth; contraception and disease prevention; sexual coercion and abuse; sexual dysfunctions and their treatment.

Psy 3051s. The Psychology of Women. (HDiv; 4 cr; not offered 1999-2000) Feminist approach to the psychological study of women’s personality, behavior, development, language issues, motivation, work and family lives, sexuality, health and psychobiology, adjustment and therapy, and victimization experiences. Focuses on women of color, feminist research methodology, and feminist analysis of psychological theories of women.